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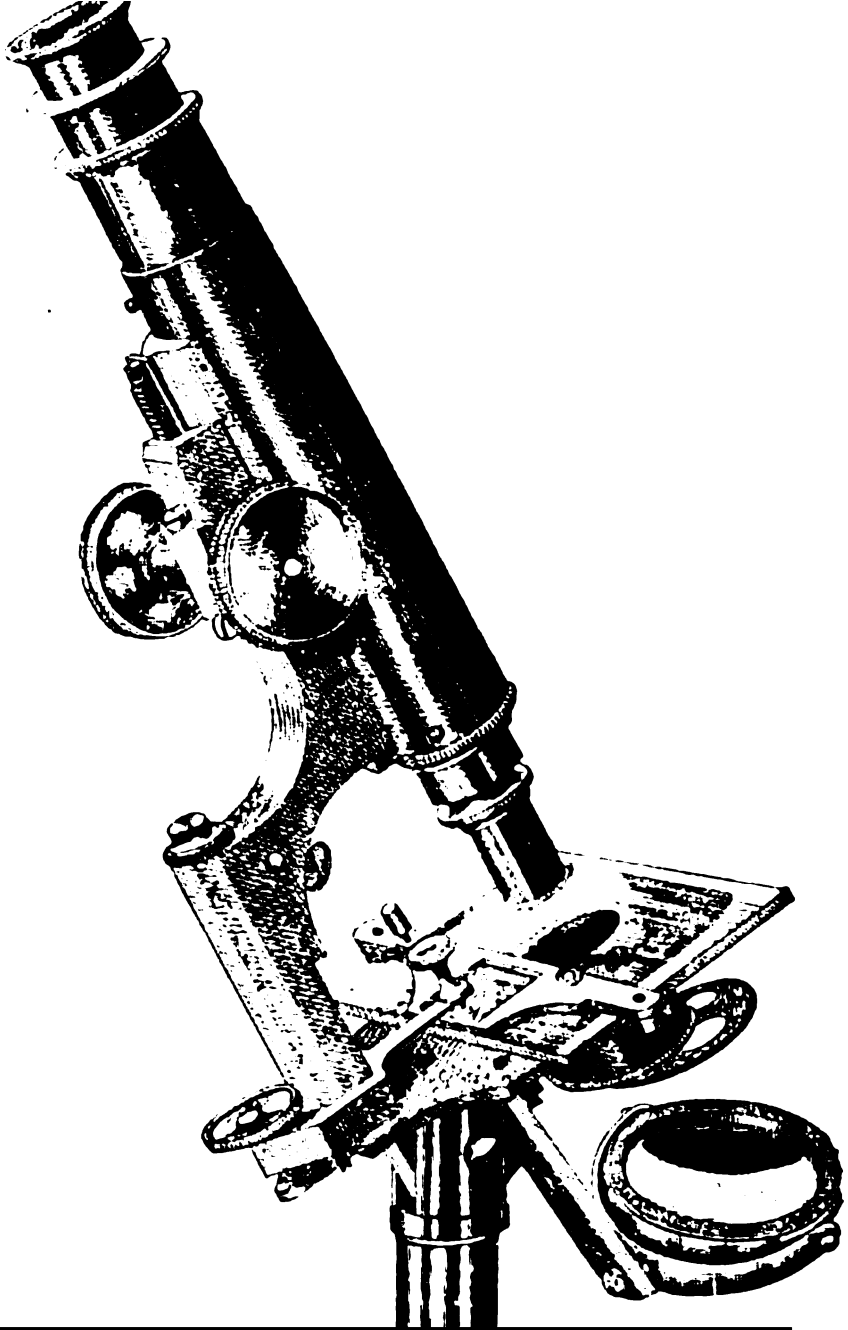
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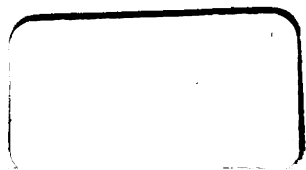
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Died,

At 1 o'clock A. M., on Friday, December 11th,

1874,

JAMES VAN ZANDT BLANEY, A.M., M.D.,

FOUNDER AND FIRST EDITOR

— OF THE —

CHICAGO MEDICAL JOURNAL.

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Obituary.

JAMES VAN ZANDT BLANEY expired on the 11th of December, inst., at one o'clock in the morning, being in his 55th year.

His death is a shock to the scientific world, and a deep affliction to a wide circle of intimates and friends. The pulpit, the press and the public have united to do him honor, and have laid their tribute on his tomb. After a life of distinguished service to truth and humanity he sleeps well.

Dr. Blaney was born May 1st, 1820, at New Castle, Delaware. He sprang from a good stock. His parents were gentlefolks, and their home was the resort of the distinguished men of that day. John M. Clayton, Judge Baldwin, and Dr. McClellan, were frequent guests. The then youthful subject of this sketch was a delighted listener to their animated and polished conversation. His native love of truth and keen insight were quickened by association, and he was moved to a noble ambition.

He excelled in boyish sports, and keenly enjoyed them, but his thirst for knowledge was insatiable. While others were idle, he listened, and thought, and studied. He learned everything readily, and laid up great stores; but he preferred natural science, and devoted himself to it. He graduated at Princeton when only 18 years old, but remained there some months as a resident graduate, pursuing his studies under the distinguished Prof. Joseph Henry. He had already become a learned and skillful chemist, and had taken a survey of the kindred sciences.

From Princeton he went to Philadelphia and studied medicine under the great masters there. He completed his course before he arrived at age, and perfected himself by practice in the hospitals. He also pursued his favorite science of chemistry in connection with Prof. Booth, afterwards director of the mint.

Early in the year 1843 he set out for the West, armed with letters to leading men in this region. He visited the Mammoth Cave, was a guest at Ashland, was stationed for a season at Jefferson Barracks, sailed up the Mississippi to St. Paul, and finally, in the fall of the year 1843, arrived at Chicago.

His work here was not done in a corner. He associated with the late Dr. Daniel Brainard in founding Rush Medical College. His first chair united Chemistry, Pharmacy and *Materia Medica*, and the young man of 23 years proved an acceptable lecturer on all these topics. At the same time he engaged in the practice of medicine with ardor and success. His enterprises prospered, and his sphere of effort widened. He soon became a popular lecturer on scientific subjects, and delivered many courses of lectures before the Mechanics' Institute and other associations. He was an efficient member of the Board of Education, and was instrumental in building Dearborn schoolhouse, the first permanent school building in the city.

In May, 1846, he organized an expedition to explore

the southern shore of Lake Superior. He was accompanied by the late Dr. J. H. Bird, who acted as civil engineer. The result was the discovery of mineral deposits, which have since been mined to great profit.

Dr. Blaney was in active practice during all the cholera years, devoting his great skill to rich and poor alike. Night and day he pursued his errand of mercy, bringing healing to many.

He was the founder of the CHICAGO MEDICAL JOURNAL, and for many years its Editor. His treasures of knowledge were poured out to enrich its pages, and his name and influence aided in giving it a wide circulation. His services as an analytical chemist were constantly in request. His aid and opinion were sought by an army of inventors, miners, manufacturers, dealers. As a detector of poisons in criminal cases, he became "a terror to evil doers, and a praise to them who did well."

The reader will remember the celebrated case of George W. Green. He was tried in this city on the charge of poisoning his wife, and was convicted on the testimony of Dr. Blaney. By the use of novel tests the Doctor found strychnine in the stomach of the murdered woman, and testified to it. He was critically cross-examined, but sustained himself. His analysis was published on both sides of the Atlantic, and was at first the subject of some adverse criticism. But he defended himself successfully, and won the assent of the scientific world. The criminal himself said to him: "Dr. Blaney, God guided your investigations!" and the same night the wretched man hung himself in his cell.

In a less conspicuous case of the same sort Dr. Blaney was the means of saving life. An expert testified to the presence of arsenic in the stomach. Dr. Blaney was called for the defense, and overwhelmed the prosecution. After denying the presence of arsenic, he turned to the presiding Judge and said: "Your Honor, if the test of

the gentleman is to be relied on, I can prove the presence of arsenic in the water your Honor is drinking." And he made good his point by applying the test to the water on the spot.

In labors like these, Dr. Blaney employed himself until about the year 1857. By this time his reputation had become national, and his name was known beyond the seas. He had received and declined many invitations to other fields of honor and influence. But, being invited to the chair of Chemistry and Natural Philosophy in the Northwestern University, at Evanston, he accepted, and removed with his family to that place. He was impelled to this step by the conviction that he could not with safety continue the general practice of medicine, and by his love of country life. He fitted up a beautiful home, and laid out on a sand ridge a garden marvelous for its floral display, and for the variety and excellence of its fruits and vegetables.

At the breaking out of the war of the Rebellion he was summoned to Washington and entered the army as Surgeon, with rank of Major of Cavalry. Here his high qualities secured him places of trust. He was for a year Medical Director of the Department of Virginia and North Carolina with head quarters at Norfolk, and was with General Sheridan at the battle of Winchester, having charge of the hospitals. He remained in the army until the close of the war, serving with zeal and winning promotion. Under his administration ample provision was made for the sick and wounded, and no emergency found him unprepared. Upon the return of peace he resumed the duties which had been partially interrupted. He was solicited to practice as a physician, and consented to do an office business, and was called in consultation in difficult cases. He never resigned his chair in Rush Medical College, and he now resumed his regular courses of lectures. He was again an analytical chemist, and an authority in science. Upon the death of Dr. Brainard in

the fall of 1866, he succeeded to the presidency of Rush Medical College, and wearing the harness while he had strength to endure, he pursued his career to the end.

In forming Dr. Blaney, nature was bountiful. He was above the middle height, of a lithe and graceful figure, crowned by a noble, well poised head, and a face full of thought and feeling—a sensitive and kindly face, full of dignity and courtesy. In mind he was gifted beyond the common lot. His powers were disciplined and always in the field. A new thought found its appropriate place and was never in the way. He loved science and pursued it, and made it his own. He found—

“tongues in trees, books in the running brooks,
Sermons in stones, and good in everything.”

His vivacity was wonderful. His graceful and appropriate gestures added an indescribable charm to his conversation and lectures.

He possessed a noble simplicity of character. He was truthful and just. He hated evil speaking, and guarded against it with jealous care. He was a model physician. His presence in the sick room diffused sunshine and calm. He seemed to know by instinct the disease and the remedy. Dr. Brainard once said, that when he could think of no remedy, he sent for Dr. Blaney, and added, “he always has something to suggest.”

He never became insensible to the sufferings of others. After watching for a lifetime the “tide of human woes,” he was as tender as ever. His eyes would fill with tears at a story of suffering. He had not long ago for a patient a little girl, who had broken the upper third of her thigh, and was in danger of being crippled for life. He did for her all that skill could do and was completely successful. The restoration was complete. When the work was done and it was safe to remove her, his eyes filled with tears of joy, he took her in his arms and carried her to the car-

riage, drove her himself as far as she could safely go, and then brought her home in triumph.

His conversation was improving. Making no ostentatious display of knowledge, he brought from his storehouse "things new and old." He was gifted in anecdote and illustration. In his happy home, surrounded by his wife and children, he was genial and light-hearted, dispensing a graceful and refined hospitality.

In fine, he was a gentleman not of tinsel but of gold. He had sad hours, but on the whole a bright and happy life. Perhaps his sorrows are not to be deplored, for "sweet are the uses of adversity."

In his long illness, affection which never tired, watched beside him, and the Lord, as we trust, sent him the message of his love.

MASONIC RECORD.

Dr. Blaney was widely known in the Masonic order in which he had been honored with high positions. He was a Past Master of Oriental Lodge, in Chicago, and Past Commander of Apollo Commandery Knights Templar; was the first Grand Commander of the Grand Commandery of Illinois; was Generalissimo, the third highest in rank of the officers of the Grand Encampment of the United States, and an honorary member, 33rd degree, of the highest, or Scotch rite, Masonic organization.

J. W.

Original Communications.

ARTICLE I.

THE MEDICAL EXPERT AND MEDICAL EVIDENCE.

By M. A. McCLELLAND, M.D., KNOXVILLE, ILL.

Evidence is that which is submitted to any competent tribunal as a means of ascertaining the truth or falsity of any allegation made before it. It is that which demonstrates or makes clear the truth of the fact or point in issue, either on one side or on the other, and to be competent evidence it must be restricted to the very point in issue. The term "proof," which is commonly used as a synonym for evidence, is employed by legal writers to indicate the effect made upon the mind by the declarations of the witness. "Evidence" they apply to the means used to obtain proof. "Proof is the legal credence which the law gives to any statement; evidence is the legal process by which that proof is made." (Phillips.)

Satisfactory or sufficient evidence is such an amount of proof as would convince the judgment of a common man, and which would lead him to do or act, in matters concerning himself, in the same way as he would if all the facts were within his own personal knowledge.

Competency and admissibility of evidence are questions within the province of the court; sufficiency and effect are matters determined by the jury. A party aggrieved has his redress in a bill of exceptions, and in appeal to a higher court.

One other rule bearing upon evidence is required by courts of justice, viz.: That the *best* evidence the nature of the case will admit of shall be produced, if possible to be had. Strict equity demands that the *best* evidence shall be sought from those best qualified to render *true* testimony. We will see further along how the true spirit of the rule is avoided, especially by those having a bad case to sustain.

The testimony of a mechanic as to the necessity for the removal of a limb, by amputation, could not be received in evidence, for the reason that his avocation in life does not give him the requisite data upon which to found a competent judgment. Here, the separating of things nearly alike, giving to each its due weight, is beyond his skill, therefore he would not be permitted to give evidence in such a case. Such testimony, if given, would not be *competent* evidence.

The testimony of a witness that a limb had received a gun-shot wound, would not relieve the surgeon from paying large damages for malpractice in removing it by amputation, if it was not further shown that the destruction of the vascular and nervous connection with the rest of the body, or some other good reason, rendered the operation necessary. The former evidence, without the latter, would not be *sufficient*.

The testimony of the witness that the prostate gland was not in the head, nor breast, nor stomach, failing to say where it was located, *should* not have been received, because where it *was not* was not the *point* in issue.

It is the first and most important rule of evidence, that the best evidence of which the case is capable shall be presented, for if the best evidence is not offered, it gives rise to the presumption that such evidence would go against the party neglecting to procure it. This is the most important rule in the administration of equal and exact justice, but how frequently we have in its stead the loud assumptions of ignorance and vanity, the records of our courts too frequently show. The reasons for this will be presently shown.

In some of the European states, the courts, in cases of obscure or doubtful physical or mental conditions, summon to their aid physicians, eminent for their knowledge and skill in the several departments of medical science, who, like all witnesses, are allowed, upon the strength of their acknowledged skill, to give opinions in evidence. Such witnesses are called experts.

In general, a witness must depose to facts that are within his own knowledge, but upon questions of science, skill or trade, persons of skill in these avocations may not testify to facts only, but may be permitted to give opinions also, which are received in evidence. "Physicians, when summoned before courts, may appear in a two-fold capacity, that is to say, either as *ordinary* witnesses, to state facts within their own knowledge, or as *skilled* witnesses, to interpret them." (Ordronaux.) It is only in the last capacity they would be designated experts.

From a statement of facts within the personal knowledge of the witness, the jury may draw the deductions and conclusions necessary for the determination of the cause, but upon matters involving abstruse questions in science, trade and commerce, ordinary men, who usually constitute juries, are not acquainted, and consequently are not capable of determining what the facts are in each particular case. It is in the trial of such cases, in which the subject matter is of such a nature that ordinary men have not sufficient knowledge, that the office of the skilled witness is demanded. (*N. E. Glass Co. v. Lowell*, 7 Cush. Mass. R. 319.)

To constitute a "medical expert," it requires more than a popular reputation for skill and judgment in things pertaining to disease and its treatment. The *actual* possession of these requirements does not necessarily imply ability to perform the duties of an expert creditably in every case. By this, I would intend very particularly and decidedly to say, that neither great success in the ordinary practice of medicine and surgery, nor popular and well deserved reputation in the practice of the same, constitutes, in any sense, *expertness* in certain branches of medicine and surgery, insanity for instance.

In this disease, the popular idea is, that it is a definite mental condition in every case, capable of clear definition, but the scientific observer recognizes in the mental affection the same characteristics that are met with in physical

derangement, namely, a gradual passage from the sane to the insane state, as gradual as health passes into disease. Men of the greatest experience cannot fix the boundary line. What, then, can the ordinary practitioner do, who has perhaps, in a life-long practice, not seen a dozen cases? "Who can say where twilight ends and darkness begins?"

It is a well understood fact by life insurance companies, and, indeed, by intelligent observers generally, that many of the most fatal maladies to which mankind is liable, to the instructed physician are known and determined by certain symptoms and signs, while to unskillful observers they remain *res incognita*. Expertness, therefore, is the result of large observation and experience in special arts and sciences. The field is too large, life is too short, for any one person to accomplish great attainments in all branches of medicine; so where, from the necessity of the case, medical men have to act in the capacity of surgeon, physician and obstetrician, we can scarcely expect to find experts. "However," Dr. Taylor remarks, "medico-legal knowledge does not consist so much in the acquisition of facts, as in the power of arranging them, and in applying the conclusions to which they lead to the purposes of law. A man may be a most skillful surgeon, or a most experienced physician; his mind may be well stored with professional information; yet if he is unable, by the use of simple language, to make his ideas known to others, his knowledge will be of no avail. One far below him in professional standing and experience may make a better medical witness." This should encourage us to improve every opportunity in expressing our ideas in our common tongue as clearly and as connectedly as we may.

We should be stimulated to study by the knowledge, also, "that the mysteries of nature are only capable of solution through the physical sciences. Medicine lacks much of being a positive science. The mechanism of the human body is clear, and that is all. We see the

workman and the tools, but the skill that guides the work, and the power that performs it, are as invisible as ever. We have learned nothing but the mechanism of life, and are no nearer its essence. Beyond the mechanical facts, all is mystery in the movements of organization, as profound as the fall of a stone or the formation of a crystal. To the chemist and the microscopist the living body presents the same difficulties, arising from the fact that everything is in a perpetual change in the organism. The fibrine of the blood puzzles the one as much as the globules puzzle the other. In the brain we are sure we do not know how to localize functions; in the spinal cord we think we know something, but there are so many anomalies and seeming contradictions and sources of fallacy, that, beyond the fact of crossed paralysis of sensation, and the conducting agency of the gray substance, I am afraid we retain no cardinal principles discovered since the development of the reflex functions took its place by Sir Charles Bell's great discovery. No satisfactory and conclusive answer has been made to these questions: Why does one cell become nerve and another bone; why one select bile, another fat? How is the solvent agency of the digestive fluid explained? What is the meaning of 'affinity' or 'catalysis' in chemistry? How is it the liver secretes sugar, or how are blood corpuscles formed out of lymph corpuscles, and what becomes of them? What is the office of the vascular glands, the spleen, the thyroid and thymus bodies? What is the function of Peyer's patches? Do these glandules perform the office of lymphatic glands? What theory of animal heat is correct—that of Black, Lavoisier, Crawford, or Liebig, or of no one of them? That of Liebig now being doubted, who will explain the wonder?" (O. W. Holmes, M.D.)

For the want of a little moral courage, medical men now permit themselves to testify foolishly time and again. The simple statement that he is not qualified to testify for want of special study and a practical acquaintance

with the case under consideration, is all that is required to release him from the disagreeable task. The idea is too generally prevalent that the medical witness must, under no circumstance, admit his ignorance, lest upon the more practical points of his profession he will have to admit that he is an impostor and a fraud. The fact is patent, and to none more so than the profession, that the profession is made up, to a larger extent than is pleasant to contemplate, of the refuse material of all other professions and occupations in life, and that it is a fraud of the most abominable proportions. This is not so much the fault of the profession, which has among its followers thousands of as good men as there are in the land, as it is of the vicious social and political system under which we live. A profession governed by laws that have no legal character, having as umpire of its claims, to a great extent, only ignorance and self-conceit, how could it be otherwise? In our courts of law, who is the judge of the value of expert testimony? A jury, which is led by its prejudices as frequently as by the testimony; twelve men, who are as often as otherwise the loafers around the court room, men who have never given a thought to these matters, and, as Dr. Ray observes, "nor would have been much better able to draw just conclusions if they had."

It is an acknowledged principle that juries are confined to the investigation and consideration of facts, and to the application of the law as laid down by the court, but if they should have opinions of their own usurping the functions of the witness, or have a law of their own usurping the functions of the judge, what redress? They once might have been impeached. Now, the aggrieved party may move for a new trial with its attendant expenses. Should it happen, as it sometimes does, especially in a case of alleged insanity, that the judge should usurp the function of the expert, what redress? Appeal to a higher court. If the witness usurps the function of judge or jury, the court or counsel promptly administers

a rebuke. And this is right. (*Millard v. Brown*, 53 N. Y.)

"But when scientific men are called as witnesses, they cannot give their opinions as to the general merits of the cause, but only their opinions upon the facts proved. And if the facts are doubtful, and remain to be found by the jury, it has been held improper to ask an expert who has heard the evidence, what is his opinion upon the case on trial; though he may be asked his opinion upon a similar case, hypothetically stated. Nor is the opinion of a medical man admissible, that a particular act, for which a prisoner is tried, was an act of insanity." (*Greenleaf's Evidence*.)

Starkie also says, "Such opinions are admissible in evidence, although the professional witness founds them entirely on the facts, circumstances and symptoms, established in evidence by others and without being personally acquainted with the facts."

"Witnesses are *not receivable to state their views on matters of legal or moral obligation*, nor on the manner in which *other persons* would probably be influenced, if the parties acted in one way rather than in another. Therefore the opinions of medical practitioners, upon the question, whether a certain physician had honorably and faithfully discharged his duty to his medical brethren, have been rejected."

"But where a libel consisted in imputing to the plaintiff that he acted dishonorably in withdrawing a horse which had been entered for a race, and he proved by a witness that the rules of the Jockey Club, of which he was a member, permitted owners to withdraw their horses before the race was run; it was held that the witness, on cross-examination, might be asked whether such conduct as he had described as lawful, under those rules, would not be regarded by him as dishonorable." (*Greenleaf on Evidence*, § 441, and note.)

So also the medical witness is not to be asked whether the person in question possessed sufficient mind to transact

business or make a will, for these are conclusions of law, depending upon the nature of the business, with which the expert is not supposed to know anything. (*Fairfield v. Blascomb*, 35 Vt. 398; *White v. Bailey*, 10 Mich. 155.

So, also, to the question: "When the defendant has been undeniably subject to fits of epilepsy, should he not have the benefit of every reasonable doubt that might arise as to his sanity?" his humanity would lead him promptly to answer in the affirmative; yet if the opposite party should object, which he probably would do, the question could not be answered. (*State v. Klinger*, 46 Mo. 224.)

In a case of epilepsy, when a crime has been committed without any possible motive, without premeditation or passion, openly and in a way not usual with criminals, the expert would have a right to say, that the criminal impulse was most positively the result of the epilepsy. In this case, however, the expert must *know* that the criminal act was immediately preceded by a fit or fits.

The essential requisite in the expert, so far as it relates to his profession, consists in an extensive acquaintance with the principles of Anatomy, Physiology, Therapeutics, Toxicology and Pathology; general, special, medical and surgical. However well prepared the witness may be, he must be particularly careful not "to regard his line of duty as lying in the direction of the success of the one who employed him rather than of the discovery and establishment of truth." The expert is in no sense the advocate of one party or the other, but is sworn to testify to the truth, the whole truth, and nothing but the truth.

Professor Washburn, (Am. Law Review, October, 1866,) in speaking on this subject, says: "That judge or lawyer, however, may consider himself fortunate, who has not, when trying a case involving inquiries to be answered by experts, again and again felt that the opinions advanced by a witness had more to do with promoting the cause of the party in whose favor he appeared than the further-

ance of justice. This is partly from the nature of the subjects upon which experts are usually called, and partly from the inability, which many learned and strong-minded men are under, of discriminating in matters of judgment and opinion between what they wish and what they think, or what, upon principles of sound philosophy, they ought to believe."

The expert is brought into the presence of the court and jury in the same way as an ordinary witness, by summoning him to attend by service, personally rendered, of a writ of *subpœna*, which is a judicial paper, commanding the witness to appear before the court having jurisdiction, to testify what he knows in the matter mentioned in the writ. In order to secure the attendance of the witness, the statutes of the different States provide for the reasonable expenses, which are fixed at a certain sum for each day's actual attendance, and for each mile's travel from the residence of the witness to the place of trial and back, without regard to the employment of the witness, or his rank in life.

The sums paid are not alike in all the States, but the principle is believed to be the same. In some States it is sufficient to tender to the witness his fees for travel from his home to the place of trial, and one day's attendance, in order to compel him to appear upon the summons; but in others the tender must include his fees for travel in returning. This is the rule in the courts of the United States. (Conklin's Practice, pp. 265, 266.)

The practice is not uniform in this country, as to the question whether the witness, having appeared, is bound to attend from day to day, till the trial is closed, without the payment of his daily fees; but the better opinion seems to be that without payment of his fees he is not bound to submit to an examination. (Greenleaf on Evidence, § 310.)

"A physician must respond to the *subpœna* of the court, but when put upon the stand as an *expert*, he is not obliged to testify, until he is paid by the party call-

ing him, such a fee as the professional opinion and time spent in court would be worth, under ordinary circumstances, out of court." (*Webb v. Page*, 1 Carr. & Kir. 23.) In this case the court said: "There is a distinction between the case of a man who sees a fact and is called to prove it in a court of justice, and that of a man who is selected by a party to give his opinion on a matter with which he is peculiarly conversant from the nature of his employment in life. The former is bound as a matter of public duty to speak of a fact which happens to have fallen within his knowledge; without such testimony the course of justice must be stopped. The latter is under no such obligation; there is no such necessity for his evidence; and the party calling him must pay him." (Redfield on Wills, 2nd Ed., Part 1, 155. Note 46.) In a case in the United States District Court, Mr. Justice Sprague refused to compel the attendance of an interpreter who had neglected to obey a subpoena. The learned Judge said that a similar question had arisen as to experts, and he had declined to issue process to arrest in such cases. When a person has knowledge of any fact pertinent to an issue to be tried, he may be compelled to attend as a witness. In this all stand upon equal ground. But to compel a person to attend merely because he is accomplished in a particular science, art or profession, would subject the same individual to be called upon in every case in which any question in his department of knowledge is to be solved. Thus the most eminent physician might be compelled, merely for the ordinary witness fees, to attend from the remotest part of the district in which a medical question might arise. This is so unreasonable that nothing but necessity can justify it. The case of an interpreter is analogous to that of an expert. It is not necessary to say what the court would do if it appeared that no other interpreter could be obtained by reasonable effort. (*In Case of Roelker*, 1 Sprague's Dec. 276.)

"Once upon the stand, the *skilled* witness is in the

position of any professional man consulted in relation to a subject upon which his opinion is sought. His skill and professional experience is his individual capital and property, that he is not obliged to bestow gratuitously upon any person. Neither the public nor private persons have a right to extort his professional services, without a just compensation. On the witness stand, as in his office, his opinions are his own, and he can give them or withhold them as he chooses, for he cannot be compelled to give an opinion, nor be committed for contempt if he refuses to do so. When, however, he has given his opinion, he has now placed it among the *res gestæ* of the evidence, and cannot decline repeating or explaining it on cross-examination. Once uttered to the public ear of the court, it passes among the facts in evidence, and counsel may use it as they please, without any farther compensation to him. The point of declining to give it gratuitously must be made, if at all, at the opening of his examination *in chief*, and will avail him nothing if delayed until the cross-examination." (Ordranax Jurisprud. of Med., §§ 113, 114.)

A physician who knows nothing as to the cause of death, in cases requiring legal inquests, cannot be forced to testify in respect to opinions in regard to cause of death, without first making a *post mortem* examination, and this he may *refuse* to make, as he may refuse to render any other *personal* service. For such examination it may not always be convenient to pay him in advance; but he has an undoubted right "to demand a legal promise from the party requiring the service, whether the party be a public officer or private citizen." (Ibid., § 116.) "A physician is not entitled to any greater compensation for traveling to and giving evidence at a coroner's inquest, in obedience to a subpoena, than any other witness; but the expenditure of labor and skill by the physician in a post mortem examination will entitle him to additional compensation." (*Gaston v. Commissioners of Marion Co., Ind.*, 3 Ind. 497.) Such compen-

sation must be *reasonable*. (*Tuson v. Batting*, 3 Esp. N. P. 192.)

I may remark further, for the instruction of the junior members of the profession, that a physician has a right to *refuse* any personal service, especially when no fee is tendered. But if he once enters upon the performance of the service, he becomes responsible for any damage that may accrue through his negligence or want of care. (Edwards on Bailments, p. 98.)

In a case which came before the Court of Exchequer, May, 1868, (*Maxsted v. Morris*,) a witness willfully disobeyed a subpoena. In consequence of this, the trial was postponed, at great expense. An arrangement was made by which the witness bound himself to pay a part of the expense. The Chief Baron said: "It must be distinctly understood that in all cases where it appeared to the court that there had been a willful disobedience of a subpoena after proper service, such a contempt of court would be visited with the punishment it deserved." Martin, B.: "It was not to be tolerated that a man should exercise any discretion as to whether he would or would not attend a court in pursuance of a subpoena. Enormous costs were incurred in preparing a case and bringing it down to trial, the whole of which were to be thrown away and wasted, because a man refused to obey a lawful summons to attend as a witness." Pigott, B.: "A subpoena was not to be treated as mere waste paper. Public justice required that persons willfully committing contempt of court should be dealt with in such a manner as to teach them that they could not commit a contempt of court with impunity."

The question may not be one of fees, but of obedience to a simple order to attend and give evidence on matters of *opinion*, irrespective of scientific facts. In *Simpson v. Halliday*, 1864, I was required to attend on a subpoena as a skilled witness, to give evidence of *opinion* in reference to the alleged infringement of a patent. The defendant, who summoned me, did not make it in any way

a question of fees ; but, being wholly unacquainted with the facts of the case, I did not feel in a position at a short notice to appear as a witness for parties of whom I knew nothing. I obeyed the subpœna, as the disobedience of it might have been, in the present uncertain state of the law, a contempt of court ; and, after giving my evidence, I requested his Honor to state, for future guidance, whether a skilled witness was compelled to attend under such circumstances as those in which I had attended. I referred him at the same time to the decision of Lord Campbell, in *Betts v. Clifford*. The Vice-Chancellor (Wood) said that a court of law never gave an opinion on a speculative question, and there the matter ended.

It would seem, therefore, that a skilled witness, who is not acquainted with *any of the facts* of a case, may be compelled by a subpœna to attend and give evidence on a matter involving scientific opinion alone. Some months before this occurrence, I had given evidence in a similar case, and the defendant, Halliday, seeing that my opinion in that case was favorable to his views, exercised a right to impound my services on his behalf. When some portion of the public press undertake to censure experts for acting as hired witnesses, it may be as well to remember that they may be sometimes unwillingly forced into court by subpœnas which they dare not disobey.

A medical man receiving separate subpœnas to attend trials at different assizes, which are held at or about the same time, the opinion of one of the most learned judges on the bench, was "that in all cases in which there were served separate subpœnas, fixing trials for the same time, the *civil* should give way to the *criminal* case. The former can be postponed ; the latter cannot. But if the subpœnas are two criminal cases, the course of a witness should be to attend to that in which the subpœna was first served upon him." (Taylor Princip. and Pract. of Med. Jurisp., vol. 1, 1873, ch. 1.) For the case of *Betts v. Clifford*, in which it was held that an expert might disobey a subpœna with impunity, see Taylor's Med.

Jurisp., by Penrose, 1866, p. 38. Professor Ordranax is inclined to think that the opinion of the court in above case was misapprehended by the reporter.

Witnesses living within the geographical boundaries of a State are considered within the jurisdiction of courts of record ; and in the Federal courts the writ of subpoena cannot be served without the district of the court. By inter-State arrangement depositions can be taken to be used in the trial of causes. If, after being duly summoned, fees paid or tendered or waived, a witness willfully neglects to appear, he is judged guilty of contempt, and, on motion of the party calling him, he is proceeded against by an attachment. An attachment for contempt proceeds not upon the ground of any damages sustained by an individual, but is instituted to vindicate the dignity of the court. The punishment for contempt is fine and imprisonment at the discretion of the court.

The party injured by the non-attendance of a witness has also his remedy, by action on the case for damages at common law ; and a further remedy, by action of debt. (Stat. 5 Eliz., ch. 9.)

If a witness resides out of the jurisdiction of the court, his testimony can be obtained only by taking his deposition. This is done in the following manner : The adverse party is notified to be present at the taking, and put interrogatories if he think fit. This notice is served upon him or his attorney, as either may be nearest, allowing time, after the notification, of at least one day for every twenty miles travel, Sundays excluded. Such deposition must be retained by the person authorized to take it, till he shall deliver it with his own hand into the court for which it is taken ; or it must, together with a certificate of the causes or reasons for taking it, as above specified, and of the notice, if any, given to the adverse party, be by the magistrate sealed up, directed to the court, and remain under seal till it is opened in court. The usual mode of transmission is by mail, care being taken to inform the clerk, by a proper superscription, of

the nature of the document inclosed to his care, for, if opened by him out of court, though by mistake, it will be rejected. (*Beal v. Thompson*, 8 Cranch, 70; *Law v. Law*, 4 Greenleaf, 167; Greenleaf on Ev., §§ 320, 322.)

The above relates only to civil cases. In criminal cases witnesses are compelled to attend without a tender of fees. But their fees will, in general, be finally paid from the public treasury. In all such cases, the accused is entitled to have compulsory process for obtaining witnesses in his favor. (Greenleaf Ev., § 311.)

"After a witness is sworn and his competency determined, he is first examined by the party calling him. This is the *direct* examination. He is subsequently examined on the same subject by the adverse party. This is the *cross-examination*. In the direct examination, questions that admit of simple affirmative or negative answers are not permitted. Neither must the question assume facts to have been proved which have not been proved, nor answers given that have not been given. The witness is examined on matters of fact within his own knowledge, either of words or actions. In matters of skill and judgment, he may draw inferences and conclusions, which under ordinary circumstances are drawn by the jury alone." (See also *N. E. Glass Co. v. Lowell*, 7 Cushing's Mass. R. 319.)

"Cross-examination is one of the principal tests which the law has devised for the ascertainment of truth, and is certainly a most efficacious test. It is by it that the situation of the witness, with respect to parties and the subject of litigation, his interests, motives, inclinations, prejudices, means of obtaining a correct knowledge of the facts to which he bears testimony, the manner in which he has used these means, his power of discovering facts in the first instance, and his capacity for retaining and describing them, are fully investigated and ascertained, and submitted to the consideration of the jury." (Starkie.)

To the foregoing rules of evidence there are some ex-

ceptions, as where the witness called appears to be inimical to the party producing him, or unwilling to give evidence, or when an omission in his testimony is evidently caused by want of recollection. However, this matter lies with the discretion of the judge, who will prohibit or permit such questions as he deems best for the course of justice.

Though a witness can testify only to such facts as are within his own knowledge and recollection, yet he is permitted to refresh and assist his memory by the use of *written instruments*, memoranda, or entries in a book. A copy of the original note will generally be objected to. As to the time when the writing thus used to restore the recollection of facts *should have been made*, no precise rule seems to have been established. Such writing should be made at the time the facts were observed, or shortly after. In the Scottish courts, with the exception of memoranda made up at the time, or shortly after the occasion, a witness is not permitted to refer to a written paper. There is one exception to this rule, and this relates to medical or other scientific reports or certificates. Mr. Allison remarks that "the reason for this exception is founded in the consideration that the medical or other scientific facts or appearances, which are the subject of such a report, are generally so minute and detached that they cannot with safety be intrusted to the memory of the witness, but much more reliance may be placed upon a report made out by him at the time when the facts or appearances are fresh in his recollection; while, on the other hand, such witnesses have, generally, no personal interest in the matter, and from their situation and rank in life are much less liable to suspicion than those of an inferior class, or more intimately connected with the transaction in question. Although, therefore, the scientific witness is always called on to read his report, as affording the best evidence of the appearances he was called upon to examine, yet he may be, and generally is, subjected to a farther examination by the prosecutor or

a cross-examination on the prisoner's part; and if he is called on to state any facts in the case unconnected with his scientific report, as conversations with persons deceased, confessions heard from the panel, or the like, he stands in the situation of an ordinary witness, and must give his evidence verbally in answer to questions put to him, and can only refer to jottings or memoranda of dates, etc., made up at the time, to refresh his memory like any other persons put into the box." (Allison's Practice, pp. 540, 542.)

The necessity for expert witnesses was recognized in the earlier history of the world. (*Vide* Leviticus, ch. 13.) However, the custom of requiring medical men to appear in courts of law for the purpose of elucidating obscure questions in medicine and surgery, does not go back to very ancient times. In the statutes of Charlemagne it was provided that, in medico-legal inquiries, the judges should avail themselves of the advice and counsel of physicians, who were to be men recognized as eminent in the profession, masters in the art, of high moral character; jurors were to be selected who were *intelligent*, and acquainted with matters pertaining to the case. Legal medicine was, as yet, in its rudimentary state. It belongs to the nineteenth century to refer these questions to a jury whose first qualification must be *ignorance* of the subject matter in dispute.

The great importance of legal medicine was farther recognized (1552) in the constitution published by the Emperor Charles V. Infanticide, wounds, poisoning, abortion, were questions referred by it to medical men. Methods of investigation proper to be employed were indicated, rules for drawing up reports of cases coming into the courts were established. (Renouard's Hist. Med.)

How often, persons especially skilled in medical knowledge have rendered efficient assistance in the furtherance of justice and in protecting the innocent, numberless instances attest. But a few years ago a woman disappeared mysteriously from society. Suspected persons were

arrested and examined for her murder; proof being insufficient, they were discharged. Many years after, the remains of an unknown person were exhumed in the vicinity of the supposed murder. Examined by celebrated experts, they were found to be those of the woman who had disappeared. This led to the second arrest of the supposed criminals, their conviction and punishment.

In the case of a person charged with murdering a child by piercing its head with an awl, Mr. Seldon, a noted surgeon, was able to demonstrate to the satisfaction of the jury, that the hole in the skull which was said to have been made with the awl, was a natural opening for the passage of a vein; thereupon the accused was honorably discharged.

The application of these principles of the science of medicine rightly belongs to the medical practitioner. When he was appointed especially an "expert," by the State, it was an unimportant matter whether the general practitioner gave any thought or not to questions that might acquire a legal character. Then, given in charge the duty of examining into the nature of the case, and making a detailed report thereon, he was enabled to discharge the duty under the most favorable circumstances. He made his examination of the dead body or other subject, submitted to him, at his leisure; consulted his authorities on disputed points; weighed doubtful opinions in his mind till they were entirely clear; then drew his conclusions, and formed his opinions, at the same time arranging in regular and available combinations all the reasons therefor. In this way and under these circumstances, great honor was reflected upon himself and his profession.

In this country there is no forensic physician appointed and paid by the State, to perform the important duties of medico-legal examinations. Instead of there being a forensic physician, a forensic surgeon and a forensic obstetrician, the examination of all questions of a medical or surgical character devolves upon one individual,

who is expected to be informed upon all branches of medical knowledge. Nor is he given any time for preparation, either in looking up the facts bearing upon the case or for acquiring any knowledge of the legal aspect of the case upon which he is required to give testimony. And yet we are told that "the opinions of experts are not so highly regarded now as they formerly were." Judge Davis, of the Supreme Court of Maine, says, (1 Redfield on Wills, ch. iii, § 13,) "If there is any kind of testimony that is not only of no value, but even worse than that, it is, in my judgment, that of medical experts. They may be able to state the diagnosis of a disease more learnedly; but upon the question, whether it had at a given time reached such a stage that the subject of it was incapable of making a contract, or irresponsible for his acts, the opinion of his neighbors, if men of common sense, would be worth more than that of all the experts in the country." This is stating the matter very strongly, but it must be admitted that to a great extent it is true. However, the learned judge might have qualified his statement, so that it would not have been so sweeping in its application. This, Judge Redfield, when commenting on the same case, does. He says: "We are more and more confirmed in an opinion that the difficulty comes largely from the manner in which the witnesses are selected. If the State or the courts do not esteem the matter of sufficient importance to justify the appointment of public officers, * * * it is certain the parties must employ their own agents to do it; and it is perhaps almost equally certain, that if it be done in this mode it will produce two trained bands of witnesses, in battle array against each other, since neither party is bound to produce, or will be likely to produce, those of their witnesses who will not confirm their views." (W. & S. Med. Juris., b. 1, § 294.)

In the above case we think Judge Davis erred in assuming that the expert could be questioned as to a conclusion in law, whereas that is a function peculiar to the court. The expert cannot be judge and witness any more than

he can be expert and jury. In such a case, or one in which insanity is the question under consideration, the expert may be required to give his opinion as to the state of mind, but not as to the responsibility of the agent.

(To be continued.)

ARTICLE II.

ON THE TREATMENT OF DYSENTERY WITH CREASOTE.

By JNO. R. CUSHING, M.D., HARRISON COUNTY, TEXAS.

An intractable epidemic "bloody flux," which prevailed in this vicinity in the summer and fall of 1873, led me to experimenting with the creasote. Its well known property of allaying the irritable stomach of our autumnal fevers impressed me that it would be valuable in the treatment of the disease, when opiates and other astringents proved nugatory or of little effect. Its *modus operandi* I will not attempt to discuss at this time, whether it acts as an astringent or an alterative, but I can say it acted admirably in my hands in its curative power over the disease. Whether it was a peculiar phase of the disease or not, I cannot say, as it will require experience in future epidemics to decide. But my faith is strong in its remedial power, and will continue so until proved otherwise.

The attacks of the disease were in most cases sudden, without chill or diarrhoea. The bowels were generally constipated, and tender over the sigmoid flexure and colon. The discharges were pure blood and mucus, with little tormina, but excessive tenesmus. The opiate plan of treatment had a controlling but not a curative influence upon the disease, for it invariably terminated (when the case did not die) in chronic ulceration of the lower rectum, frequently producing spasm of the sphincter so intolerable that the patient could not avoid screaming upon every evacuation.

Upon adopting the creasote, in combination with opiates, I was happily surprised beyond all expectation. It accomplished everything and did it in a few days, as well as obviating that ugly *after symptom*, so distressing in my preceding cases. In obstinate diarrhœas I find the preparation equally as good as in the dysentery.

When ulceration of the rectum remained after the subsidence of the disease, I found the acetate plumbi, in combination with tinct. opii, used as enemas, all that was necessary; what was very strange, enemas of creasote did but very little good.

The following cases from my note book will illustrate my plan of treatment:

Case 1. A lady, ætat 26; sick two days before called in; had been taking teas and laudanum. Found bowels costive, with great tormina and tenesmus. Sulph. magnesia ʒi, tinct. opii ʒi, water ʒvi. Tablespoonful every thirty minutes until it acted. Cold cloths to the perineum, and cloths saturated with the liniment, aq. ammon. ʒss, oil sassafras ʒss, tinct. opii ʒi, tinct. arnica ʒi, ol. olive and kerosene aa ʒij, kept constantly applied to the bowels. After the action of the salts, commenced the following formula: R. Creasote, gtt xx; Acetic Acid, gtt xl; Morphia, gr. ij; Aqua, ʒij. M. Teaspoonful every two hours until relieved. Well in three days.

Case 2. Young man, 18 years; taken about six hours previous to my seeing him; put him immediately upon the creasote mix. with the liniment; cured in thirty-six hours.

Case 3. Gentleman, aged about 50 years; had been sick about four days; had been taking opium pills, with acet. plumbi; considerable tenesmus, with dejections of bloody mucus; great prostration; bowels tympanitic. Prescribed creasote mix. with turpentine stupes to the bowels; whisky ʒi every three hours. In fifty-six hours the bowels were controlled. Creasote mix. every four

hours ; whisky, toddy and egg nog, pro re nata. Discharged cured on the fourteenth day.

Case 4. Lady, aged about 20. Cured on third day. Creasote mix. only used.

Cases 5, 6, 7 and 8, in one family, all down with hemorrhage of bowels ; no tormina or tenesmus ; great tenderness over the bowels, and irritable stomach. Creasote mix., turpentine stupes, and stimulants. All cured and discharged between seventh and fourteenth day. These cases simulated peritonitis, yet I am satisfied it was not that disease, for there was no inflammatory fever or other serious indications of that disease. The disease was evidently subacute inflammation of the lower bowels, with ulceration of the hemorrhoidal veins. My treatment proved efficacious in almost every instance. The simplicity of the treatment and the rapidity of cure, compared with the remedies I had previously used, demonstrated that creasote was an important adjuvant, in fact, the main one, in combatting the disease. I should have some hesitation in prescribing the remedy in acute disease accompanied with high febrile excitement.

In all diarrhœas that I meet with, my main reliance is in the creasote. In the treatment of the disease in children I substitute tr. opii camp. instead of the morphia, and lessen the dose according to age.

For the ulcerations in the rectum when they occurred, I used enemas of ulmus fulva and the acet. plumbi with tr. opii— $\frac{1}{2}$ 5 plumbi and gtt xxv tr. opii to about $\frac{3}{4}$ ij of menstruum—every three, four or six hours, as the case required.

Progress in Medical Sciences.

ARTICLE I.

PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.

By A. REEVES JACKSON, M.D.,

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1. Puerperal Pyæmia. By Dr. J. MATHEWS DUNCAN. (*Obstetrical Journal of Great Britain and Ireland*, September, 1874.)

2. On the Natural and Artificial Elimination of Sessile (Intra-Parietal Uterine Fibroids. By Dr. MANNEL. (*Amer. Journal of Obstetrics*, November, 1874. *Viertel jahrschr. fur die prakt. Heilk.*, 1874.)

3. Case of Uterine Fibroid removed according to a New Principle of Operation. By Dr. T. ADDIS EMMET. (*Amer. Journal of Obstetrics*, August, 1874.)

4. Intra-Uterine Fibroids. By Dr. J. MARION SIMS. (*New York Medical Journal*, April, 1874.)

1. In the course of an address delivered at the annual meeting of the British Medical Association, in August last, Dr. Duncan stated that for obstetricians, and for the world, the subject of puerperal fever was the one of first importance in midwifery, since there was unanimity in giving it the horrid pre-eminence over all other combined causes of death in the child-bed or puerperal state. He objects, however, to the term puerperal fever, as one embodying error. There is nothing, he contends, essentially puerperal known in it; nor is there anything about it of the nature of a fever, as that word is generally understood. He prefers the term pyæmia, as being most in accord with present views of pathology, although advancing science may replace it by a better one. Pyæmia is not to be understood, however, as meaning purulent blood—its former signification—but as a comprehensive term including septicæmia, icorrhæmia, etc. There is no proof that puerperal pyæmia is ever epidemic as fevers are. Neither is it caused by a miasma, for even in a pestilential hospital, the disease prevails in such a

manner as is scarcely reconcilable with the miasma hypothesis. Likewise, Dr. Duncan does not believe that the disease is propagated by contagion or infection, and, in this connection, he ridicules the prevalent idea that a practitioner who is so unfortunate as to have a case of the so-called puerperal fever, must therefore relinquish his obstetrical practice. Nevertheless, he warns the obstetrician against assuming any of the duties of the nurse, and thinks that by observing this caution, the medical attendant may make himself medically clean in hands, person and dress.

Our author denies that puerperal pyæmia is, in any sense, a kind of cholera, or typhus, or scarlatina, or erysipelas, as various authors have endeavored to show. On the contrary, he believes that the important researches of Lister and others—especially Lister—demonstrate that pyæmia is a septic disease, and that in its puerperal form it may be almost, if not altogether, prevented by a midwifery practice based on antiseptic principles, combined with stoppage of injurious communication between the sick and the healthy, disinfection, and such architectural, and other arrangements in lying-in hospitals, as may secure the fullest and best hygienic conditions.

There can be no doubt as to the great importance of the subject of Dr. Duncan's paper, but there is much doubt whether his opinions will be adopted as correct by the great body of the medical profession.

In the most favorable cases of parturition there is almost inevitably more or less wounding of the generative passages, and these contusions and lacerations present the most accommodating localities for the reception of morbid material. A woman who is the subject of puerperal pyæmia becomes a prolific source of morbid material in its most subtle and essential form. That puerperal pyæmia is frequently communicated by conveyance of this septic essence—whatever it may be—from the person of one patient to that of another, with the result of reproducing the disease, has been too frequently demonstrated to

admit of doubt; and hence, the obstetrician cannot be too careful to protect his patients from this source of danger.

2. Dr. Mannel thinks that the absorption of uterine fibroids by the administration of medicines does not occur, and that when such results have been reported, the diagnosis was erroneous, the cases being hyperplasia of the uterus, or plastic exudation in its vicinity. He regards Hildebrandt's treatment of these growths by the hypodermic injection of ergotine as needing further trial in order to determine its value. At present he evidently attaches but little value to it. The induction of sloughing of the tumor by any means, mechanical or chemical, he considers dangerous, and as too likely to result fatally from pyæmia, septicæmia, peritonitis, venous thrombosis, or exhaustion. The paper is written chiefly for the purpose of showing the results of enucleation—the only surgical proceeding of which he approves. He has collected twenty-two cases, more or less in detail, in which enucleation has been employed for the removal of uterine fibroids since the year 1858. The table is supplementary to that of Dr. West, who reported twenty-seven cases down to the year named. Of Mannel's cases only three terminated fatally,—a very favorable percentage; while of West's twenty-seven cases, fourteen were fatal. Thus, of forty-nine cases there were thirty-two recoveries and seventeen deaths.

Unfortunately for the usefulness of statistics such as the foregoing, it is well known that many unsuccessful cases are never reported, while those which result favorably are very likely to be.

3. In Dr. Emmet's case, the patient had been suffering for a month with excessive metrorrhagia, which had been kept in check only by the continued use of powerful styptics. The cavity of the uterus was found to be occupied by a fibrous tumor of the size of the fist. Supposito-

ries of gelatine, each containing 16 grs. Squibb's aqueous extract of ergot (equivalent to 96 grs. powdered ergot) were introduced into the cavity of the uterus, where they produced a markedly beneficial result. The tumor, which was attached by a broad base to the fundus, was brought near to the internal os. Dr. Emmet retroverted the uterus, which had been previously anteverted, and then seizing the tumor with a double tenaculum, drew it downwards toward the vulva, to which point he succeeded in bringing it after half an hour's steady traction. Portions of the tumor as it became attainable were removed by scissors. As the tumor was drawn down, the uterus contracted behind it, thus by its own efforts enucleating the base of the growth, and at the same time preventing hemorrhage. This made it necessary only to divide the capsule of the tumor with the scissors in order to remove the whole growth. The base of the tumor measured about two inches in diameter.

After its removal, Dr. Emmet followed his usual custom of washing out the uterus with warm water, and then painting the whole of its cavity with Churchill's tincture of iodine, as a precaution against septicæmia.

In speaking of the *rationale* of the operation, Dr. Emmet stated that he thought the steady traction arrests and prevents hemorrhage by exciting the uterus to contract behind the tumor and thus to compress the bleeding vessels; and that although the traction brings the tumor nearer and more convenient for removal, yet that it is the contraction of the uterine wall which is the efficient agent in lifting the tumor from its bed and enucleating it.

4. In this paper Dr. Sims details eight cases of large intra-mural fibroids, in six of which the tumors were successfully removed. Of the other two, one died from peritonitis, after the use of a sponge tent introduced as a preparatory measure, and the other barely escaped with her life from the constitutional disturbance produced by the same cause.

Dr. Sims enunciates two guiding principles to be observed in the artificial removal of intra-uterine fibroids: 1. The cervical canal must be freely opened. 2. The tumor must be freed from the restraint of its investing capsule.

In detail, his plan of operating is as follows: The patient must be placed under the best hygienic conditions, and then, the cervix having been widely opened the previous night by as many sponge tents as can be introduced at one time, the patient is placed in the semi-prone position and the vagina opened with a Sims speculum. The presenting portion of the tumor is seized with a strong vulsellum, and pulled forward, and its capsule opened with scissors, cutting squarely into it, and taking care not to separate the capsule from the cervix. The finger is then passed into the opening thus made, between the tumor and its capsule. This latter should be left attached to the walls of the uterus, but should be divided all around in close proximity to the borders of the cervix. The tumor being firmly held by the vulsellum, a rectangular hook, called an enucleator, is pushed rapidly up between the tumor and its capsule as far as the fundus on every side, and swept around the tumor until all the cellular and fibrous tissues connecting it with its capsule are severed. This having been accomplished, a strong double hook is passed up behind the tumor as far as possible into the cavity of the uterus, and, grasping the tumor, the latter is pulled down and slightly rotated on its vertical axis, the enucleator still pursuing its work of detachment. As the tumor comes down, the hook is passed farther up and fastened again, and thus the growth is finally brought outside the vulva. After the removal of the tumor, loose shreds are cut away with scissors, and the uterine cavity firmly plugged with iron-cotton for twenty-four hours. Should fetid discharge and septic symptoms appear, the cavity of the uterus should be freely washed out with warm, carbolized water.

From the foregoing articles on uterine fibroids, one may gather the present drift of treatment in this disease. It is evidently toward the most radical means for removal. And yet there has never been a time when such means seemed less necessary. Hildebrandt, and many others, have reported cases (now quite numerous) in which uterine fibromata of large size have either entirely disappeared or been so reduced in size as to render them comparatively innocuous, by the persistent use of ergotine alone, given hypodermically or otherwise. And it is presumptuous, if not absurd, to say, in answer to these reports, that the cases were uterine hyperplasia or perimetritic inflammatory exudation, and not uterine fibroids at all, as has been done by Dr. Mannel.

While it is unquestionably true that many uterine fibroids may be safely removed by surgical procedures—and we regard the plan pursued by Drs. Sims and Emmet as the best for sessile growths—it is equally true that in many others operative measures are exceedingly dangerous. Hence, although the great degree of success claimed by Dr. Hildebrandt has not perhaps been equaled by others who have made trial of the ergotine treatment, yet in almost every suitable case in which the use of the drug has been persisted in for a sufficiently long time, there has been marked improvement in the general health of the patient, hemorrhage has been lessened or entirely checked, and pain has abated or disappeared.

In the present state of our knowledge of this subject, we regard the surgical removal of intra-uterine sessile fibroids as imprudent and improper, unless a dangerous amount of hemorrhage, pain, or exhaustion remain after a full trial of the ergotine treatment; for it is only the presence of these symptoms that justifies or necessitates any interference with such growths.

ARTICLE II.

PROGRESS OF SURGERY.

By JNO. E. OWENS, M.D.,

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1. Bloodless Surgery. Report of Prof. ESMARCH's Address. (*The Medical Press and Circular*, London, Oct. 21, 1874.)
2. Bloodless Surgery, by means of "The New Septic Cautey." (*Bruithwaite's Retrospect*, July, 1874.)
3. Amyloid and Fatty Liver in Relation to Operations. By RICHARD BARWELL, F. R. C. S. (*London Lancet*, Oct., 1874.)
4. Surgical Treatment of Aneurisms. By Mr. T. HOLMES. (*The Practitioner*, London, Oct., 1874; *British Medical Journal*, Aug. 8, 1874.)
5. Incision versus Excision of the Knee in Children. By Dr. EDWARD LUND. (*The British Medical Journal*, *The Boston Medical and Surgical Journal*, Oct. 29, 1874.)

1. During a visit to London, Professor Esmarch, in an address delivered before the Clinical Society, took occasion to expound his method for the performance of bloodless operations. He prefaced his remarks by observing that many surgeons with whom he had conversed during his visit, were imperfectly acquainted with his method. Some, he found, used it, but not rightly; others did not consider the prevention of loss of blood important.

The object of the method is to secure good results in surgery, and the proof of its value is to be found in its influence on the mortality after operations, especially after amputations of limbs. Prof. Esmarch claims to have obtained striking results in the comparison of statistics of cases in his own practice prior to and after the introduction of his method. Its employment is by no means limited to operations on the limbs, but may be readily applied to other parts. In cases of excision of the shoulder-joint, a piece of elastic tubing may be passed around the arm-pit, and held over the shoulder by an assistant. Professor Esmarch illustrated this by

the following case: A man between fifty and sixty years of age, suffering from a myxo-sarcomatous tumor of two years' growth, the size of an ostrich egg, in the axilla. Its removal was absolutely necessary, on account of the intense pain it occasioned. The tumor was wedged in between the scapula and the chest wall, firmly adherent to and moving with the former, but not with the humerus. The growth was thought to originate from the sheath of one of the cords of the brachial plexus; and, on account of the probability of recurrence, removal of the whole arm with the scapula was decided on. The arm having been bandaged with elastic webbing as far as the shoulder, a portion of the clavicle (outer two-thirds) was removed in order to ligature the sub-clavian, the pulsation of which could not be felt from the surface. Both artery and vein were ligated, the cords of the brachial plexus cut across, and the arm, together with the scapula, was removed by anterior and posterior flaps. The edges of the flaps were united by sutures, and under the use of carbolized oil dressing they speedily united. The report does not inform us how much, if any, blood was lost during the operation.

Prof. Esmarch explained to the Society that erectile tumors of the scalp in children can be readily removed without hemorrhage, by the introduction of needles, and the application of elastic tubing around the tumor. The method can likewise be made effectual in operations upon the male genital organs. The following case will serve to illustrate its use upon these parts:

An old man suffered from extensive epithelioma of the penis, involving the under surface of the penis and the scrotum, forming a cauliflower mass the size of the palm of the hand. Urine escaped from a fissure in the centre of the growth. The inguinal glands were much enlarged, and there was great emaciation. For the operation, an elastic tube was passed around the root of the penis, over the front of the thigh on each side, and crossed over the sacrum. The penis and anterior wall of the scrotum

were now removed, together with the enlarged glands in the groin, with the integuments covering them; an incision in the median line having been made, the scrotal flaps were made to cover the exposed surface in the inguinal regions, and the urethra attached to the edges of the wound. Shortly after the operation death occurred from extensive cancerous deposit in the lungs.*

With regard to the results of the method, of three hundred cases in which it had been used, no evil had followed. In the longest operation, which lasted two hours and a quarter, and which was in a case of necrosis of both tibiæ, with resection of one knee in addition, no harm resulted from the prolonged absence of blood.

2. The objection to the employment of Mr. Henry Smith's method for the removal of hemorrhoids (clamp and actual cautery) is to be found in the great inconvenience of heating the cautery by the ordinary bed-room fire, the bars of the grate being in many instances too high to permit the insertion of the point of the instrument in the midst of a clear bright fire, whilst the handle rests on the hearth; the alternative being to thrust the iron into the fire with the handle protruding horizontally, in which case it becomes heated in the stem as well as in the button, causing the handle to be dangerously "warm" to the operator.

Messrs. Matthews, of Portugal street, London, have invented for Mr. Henry Smith "The New Septic Cautery," an ingenious arrangement, which entirely removes all these inconveniences. "The Septic Lamp" is on the principle of the Russian blow-pipe, by which methylated spirit is boiled in an upper reservoir, furnished with a safety-valve, and the spray of spirit vapor ignited by a little flame beneath the upper reservoir. The jet of flame is protected by copper sides, on which the irons are

* (The operation in the particular case cited we do not consider judicious. The age of the patient, the great enlargement of the inguinal glands, the evident cancerous cachexia, forebode a speedily fatal termination of such cases after operation.—O.)

placed, and made hot at the button only. The whole affair folds compactly, in a little japanned box, which is furnished with a tin compartment to hold the spirit.*

3. In a clinical lecture, Mr. Barwell alludes to fatty and amyloid enlargements of the liver in cases of prolonged suppuration, produced by caries, necrosis and disease of the joints. He further remarks that a patient who has suffered long from free suppuration, whatever be its origin, falls into a state of considerable cachexia; the body loses much of its fat; the skin becomes pale, of an opaque hue, often also dry, rough and inelastic. In spite of general emaciation, the abdomen, more especially of children, is generally tumid, yielding a loud hollow note over the greater part of its surface. On passing, however, to the right side, this loud note will be dulled over a certain distance below the hypochondrium according to the extent of enlargement—sometimes as low as the crista ilii. The surface of the gland (liver) is quite smooth, and the organ not altered in shape, save that its lower edge may appear rounder and thicker than usual.

There is, then, a uniform increase in size, which does

* (The handles of some of the cautery irons crack, and the irons become spoiled in consequence of being frequently subjected to intense heat. This matter of heating the irons becomes at times a serious inconvenience, and renders impracticable the use of the cautery and clamp—a method which, for the cure of hemorrhoids, has no superior. Occasionally the room in which one is obliged to operate, has neither grate nor stove. In such a case, I sometimes use an ordinary charcoal furnace, to which there are grave objections, as it should not be used in the patient's room, during the administration of an anæsthetic. It is really objectionable in any part of a house. Moreover, the preparation of a fire in the patient's room, for the purpose of heating the irons, engenders a horror which should be avoided.

Messrs. Bliss & Torrey have just imported for me Messrs. Matthews' "Septic Lamp," above described. It is fitted in a little bag, containing Mr. Henry Smith's set of clamps, forceps, scissors, cauteries, etc., for hemorrhoids. The lamp in the japanned box fits neatly in the lower part of the bag, and the case of instruments in an upper compartment. By means of the blow-pipe lamp the button of the cautery iron is made hot in "two minutes."—O.)

not affect, by pressure or obstruction, the portal circulation, since ascites is not present; and though it may diminish, it does not annihilate the secreting function of the gland, since the fæces are colored with bile, and there is no jaundice. This enlargement is due to the deposition in the constituents of the organ of oil globules in the case of fatty liver, or of a material called amylaceous, in the case of amyloid or lardaceous liver. The latter consists in the gradual infiltration of the liver with a material which appears to consist of homogeneous molecules—apparently a low form of protean, which hardens, thickens and whitens the organ, and, in some cases, destroys its function. The tissue thus affected is changed from its normal type of high organization to the lowest type of organic matter, which scarcely possesses life or function, which is hardly capable of undergoing change—even that last change of dead organism, putrefaction. Most writers on this subject consider the malady incurable.

Fat, in the shape of oil globules, is frequently present in the liver as the normal and temporary result of absorption from the intestine of oily ingesta.

The accumulation of such substance in the cells of the gland to a morbid extent may be, due to a variety of causes. It is not unusual in wasting suppurative disease, as of the bones or joints. Since in healthy life fat is frequently present in, and as often removed from, the liver, it is plain that recovery from its morbid accumulation in that organ is a much more easy process, and a far more likely event, than restoration to the norm of a liver infiltrated with so immobile a material as that which constitutes the amyloid deposit. We are, therefore, often presented with problems which are of high importance and of extreme difficulty. The first concerns our power, or want of power, to discriminate during life between these two forms of liver enlargement; the second, our faith, or want of faith, in the power of nature to cure the

secondary malady, if it be amylaceous, when its exciting cause, the source of suppuration, has been removed.

Concerning the former problem, it must be said, that our means of differential diagnosis are very imperfect, the greater hardness or softness of the liver being our chief guide. Fatty liver does not reach the size to which an amyloid organ may attain.

Concerning the second problem, Mr. Barwell, so far as the liver is concerned, does not concur in the opinion that amyloid disease once commenced is of necessity a progressively fatal malady. Although it may be impossible to diagnose with certainty during life between these two forms of enlarged liver, we have nevertheless a certain and sure guide to practice.

The liver, as well as every other organ, must be carefully examined in cases of prolonged suppuration. If, after careful investigation, the absence of any sign of amyloid disease save the enlargement of the liver be determined, any operation for the removal of suppuration is not only justifiable, but our imperative duty. Without operation the patient must die; after operation, however hard, large, and changed be the liver, there is a fair, indeed a considerable, chance of recovery.

4. In his recent lectures upon this subject, Mr. Holmes gives the following conclusions as to the treatment of popliteal aneurism:

(1.) Rapidly growing aneurisms, with a thin or imperfect sac, are best treated by immediate ligature, especially when caused by recent violence; and the success of compression is doubtful in aneurisms growing towards the knee-joint, and in all others which advance rapidly.

(2.) The Hunterian ligature has been about twice as successful in modern hospital practice in this country as the results of the accepted statistics show it to have been.

(3.) The results of the compression treatment in the same hospital have given as yet about the same average results as those of the ligature; but these results might

be much improved by a more careful employment of the method.

(4.) Too long persistence in compression is to be deprecated as being likely to interfere with the success of the ligature.

(5.) Flexion is often successful when used so as not to distress the patient, and is worthy of trial in all cases in which it stops or materially checks the pulsation, but should not be long persisted in when it is not at once beneficial.

(6.) We have no evidence showing the utility of, or the need for, the less usual forms of treatment, such as galvanism, coagulating injections, manipulations, temporary ligature, or the introduction of foreign bodies.

5. At the last annual meeting of the British Medical Association, Dr. Lund argued that in a large proportion of cases under twelve to fifteen years of age, incision was a better operation than excision, in advanced inflammation of the knee joint. His method is to open the joint by an incision in its external side, and through this, by means of a curved cutting hooked knife, all adhesions were broken down, or cut through, in order to permit the bones to be replaced in a straight line. It was rarely possible to effect the latter immediately, but slight pressure, long continued, and extension, produce excellent results. It was, however, one essential condition of the operation, that it should be conducted entirely upon Mr. Lisler's system of antiseptic dressing.

Reports of Societies.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, Nov. 23, 1874.

(Reported by RALPH E. STARKWEATHER, M.D.)

Dr. John Bartlett, President, in the chair.

Prof. De Lafontaine gave to the Society his views upon the hydrate of chloral and its action, together with details of experiments made by him, and by Dr. C. P. Simon, upon rabbits, cats and sheep, by the hypodermic injection of the hydrate of chloral.

Prof. De Lafontaine thought that the hydrate of chloral diminished the available oxygen of the blood by the poisoning of the red discs by the carbonic oxide gas set free in the action of chloral, that a person frequently taking chloral suffers from its effects as he would from frequent venesection. In poisoning by chloral, the blood taken from the jugular vein, before death, is red as carmine; after death, for some time, it will not coagulate, and the condition is like that of one who dies from suffocation.

The test, by the spectroscope, for the carbonic oxide, was then given. If the blood is healthy, there will be the two dark bands of absorption, yellow and green: if the blood has been poisoned by the carbonic oxide, the bands will likewise be the same; but when treated by the hydro-sulphide of ammonium, the two dark bands coalesce in the normal blood; but there is no such effect whatever in that which has been poisoned. Chloral changes the form of the red corpuscles; their shape is lost, and they become elongated, shriveled and rugose. Frequent use of chloral will ultimately ruin the health, as much so as the constant use of morphine. Dr. Simon, in relating the experiments he had made upon sheep, remarked that he was not quite of the same opinion as to the danger of using hydrate of chloral, as expressed by

his friend, Prof. De Lafontaine. The subject of anæsthesia and chloral, and the experiments made by Dr. Simon and Prof. De Lafontaine, were then discussed by the Society.

Dr. Owens reported a case, which he had previously reported as recovered, in which the patient has since died. It was an operation for the removal of a colloid multilocular ovarian tumor. The patient died from septicæmia. A chart of the pulse, respiration and temperature of the patient accompanied the paper; and also a report by Dr. Danforth on the microscopical examination of the tumor and its contents. We give one only of the comments on this case, made by Dr. Owens, as the article is soon to be published: "In this case, the most practiced touch could not distinguish between a colloid growth and an ovarian encysted tumor. It would be well to tap before operating, and examine the material thus brought away."

Dr. Hollister read an elaborate article upon the subject of catalepsy, illustrating the same by details of a case of rare interest, under his care at the Mercy Hospital. By request, no notes of the paper were taken, as it is expected that it will be printed in one of the medical periodicals, in its full length.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, Dec. 14, 1874.

(Reported by RALPH E. STARKWEATHER, M.D.)

Dr. John Bartlett, President, in the chair.

Dr. P. S. Hayes read a report of two cases of amenorrhœa which had been treated in the Woman's Hospital of the State of Illinois.

The first case was one of amenorrhœa from infantile uterus and ovaries, treated by dilatation, local applications and electricity.

History. Mrs. H., colored, twenty-three years of age, came under observation June 7, 1873. Has always been

delicate, and suffered from numerous indispositions. Her first menstrual period occurred when she was seventeen years of age. Since that time at irregular periods there has been a slight sanguineous discharge from the vagina. Each month she has a return of pain in the back, limbs and head, accompanied occasionally by epistaxis. She is habitually constipated.

An examination made by Dr. A. Reeves Jackson disclosed an infantile uterus; the sound passing into the uterus measured only three-fourths of an inch; neither ovary was distinguishable.

Treatment. The uterus was dilated by means of sponge tents, which, however, gave rise to a mild peritonitis. The depth of the uterine cavity had been increased to one inch. During the period of treatment, there occurred a sanguineous discharge from the vagina. After an interval of five months she resumed treatment, and Dr. Hayes employed the Faradaic current, passing it transversely through the pelvis. Afterwards, the galvanic current from fifteen elements was employed in conjunction with the Faradaic. Improvement was only very slight, and then both currents were applied to the canal and cervix. After twenty-four applications of electricity the uterus appeared to be in the same condition as at the commencement of treatment.

Case II. Amenorrhœa occurring after menstruation had been established, cured by the use of electricity. Mrs. B., colored, twenty-seven years of age, began to menstruate at the age of fifteen and was married at eighteen. Since her marriage her health became much impaired, and her catamenia irregular both as to time and quantity; three or four months frequently intervened between them. She has never been pregnant. She complains of an irritating leucorrhœal discharge, and of pain in the head and in the mammary and ovarian region, and of a frequent and painful desire to micturate;

bowels constipated. On examination by Dr. Jackson, it was found that the uterus was in its normal position; cervix a little elongated; the os was somewhat nodulated, and had a tenacious mucous plug projecting from it. The sensitiveness of the vaginal walls was abnormal; the breasts were long and flabby.

Treatment. A pill of aloes and myrrh, and electricity. Dr. P. S. Hayes applied the Faradaic current, continued through ten minutes, as follows: one of the electrodes was placed alternately over each ovary and the uterus; the other electrode over either sacro-iliac synchondrosis, the current being frequently reversed, making the electrodes alternately positive and negative. The treatment was followed by a return of the catamenia, at first scanty and lasting for one day; the last two each continued three days, and were quite normal in every respect; the disagreeable subjective symptoms had gradually disappeared. Twelve applications of electricity similar to the one above described, had been given.

Dr. F. H. Davis read a report of two cases of obscure nervous diseases, which had been under the care of Dr. N. S. Davis.

Dr. Bartlett extended an invitation to the members of the Society to examine some fifty slides which he had prepared, containing the blood, secretions, and excretions of ague patients, demonstrating the ague-plant. His investigations have been continued, and results largely increased by recent study in a malarious district of a neighboring State.

Hospitals.

ST. LUKE'S HOSPITAL, CHICAGO.

Colloid, Multilocular-Ovarian Tumor—Ovariectomy—Septicæmia—Death.

(Under the care of Jno. E. OWENS, M.D.)

Mrs. C., aged 57 years; a thin, sallow woman, and of perfectly even temper; was admitted to the hospital February 24, of the present year. Seven months previous to admission, she discovered a tumor in the *left* iliac region. The tumor had increased in size, so that the patient presented the appearance of one advanced to the eighth month of pregnancy. Fluctuation was quite distinct, and the mass freely movable from side to side. Several cysts were made out. Mrs. C. was the mother of seven children, five of which are living—the last being thirteen years old. Menstruation ceased seven months before admission. The animal functions were regularly performed, the urine normal, and the uterus not enlarged. The general health had not very materially failed. The patient had never been tapped. Dr. De Laskie Miller was of the opinion that the comparatively rapid growth of the tumor suggested a malignant element in the case.

The tumor was removed February 28. The patient not being easily affected with æther, chloroform was substituted, until the production of anæsthesia, which was then maintained with æther. The incision began one and a half inches below the umbilicus, and extended towards the pubis four and a half inches. The abdominal walls were very thin, and but a few drops of blood appeared in the line of the incision. There were no adhesions. A large cyst, with very fragile walls, presented. During the manipulation of this, in order to introduce the trocar, the cyst wall ruptured, exhibiting almost colorless, jelly-like, colloid matter, remaining *in situ*, even after a tolerably free laceration of the cyst-wall. The patient

having been turned on the left side, the colloid matter was scooped out. Other cysts were ruptured, and voided through the first one, till by gentle traction and by pressure the tumor was delivered. It was a degeneration of the *right* ovary, and attached by a well formed pedicle, which, together with the cysts, can usually be the most conveniently managed by turning the patient upon the side opposite to that from which the tumor grows. The vermiform appendix was greatly distended with colloid matter, and presented, upon its external aspect, minute cyst-like collections of the same. The peritoneal lining of the lower coils of intestine was inflamed, and resembled in condition, "granular lids." The pedicle having been secured by Atlee's clamp, the abdominal wound was closed by means of three pins extending through the peritoneal lining, and as many silk sutures penetrating the skin only. The lower end of the wound was left open for the sake of drainage. A wad of cotton batting and a flannel roller completed the dressing. The patient was put in a warm bed, in a well ventilated room, and a two-grain opium suppository placed in the rectum.

The tumor weighed sixteen pounds. The patient died of septicæmia, on the tenth day from the date of the operation.

During the first four days, the case progressed favorably. There was no pain, the patient slept well, without anodynes, and seemed perfectly undisturbed in every respect. There was an occasional regurgitation of the fluid contents of the stomach. This was effected, however, without effort, and without change of position. She took ice *ad libitum*. The diet consisted of milk toast in the morning and evening, and beef tea at intervals through the day and night. At the end of the third day the nurse noticed an offensive odor about the patient, when the bed clothing was disturbed. On the fifth day the wound having united, except at its lower end, and at that portion through which the pedicle passed, I removed one pin, a silk suture and the clamp. Upon the removal

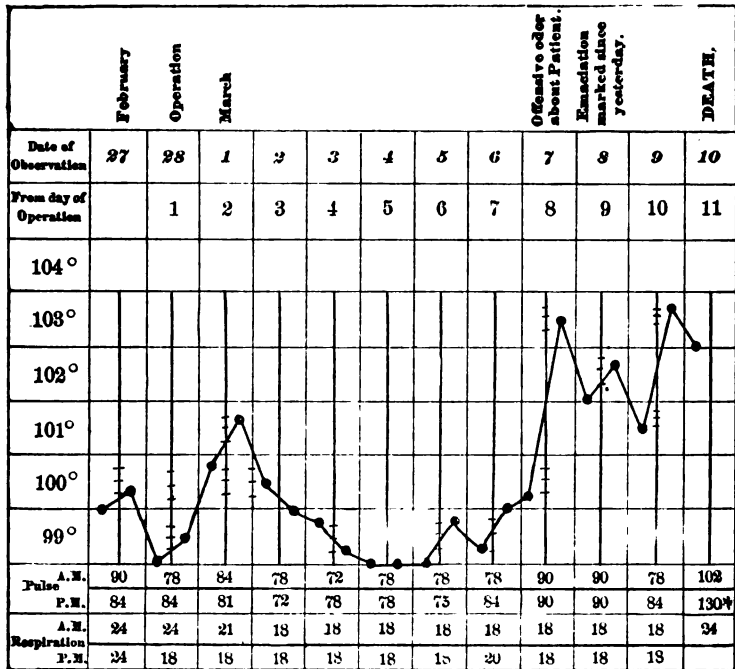
of the tent from the lower extremity of the wound, one or two drachms of blood-tinged pus escaped. The remains of the pedicle were black and offensive.

7th day. An occasional regurgitation—an offensive odor about the patient, arising from the sloughy remains of the pedicle. By the traction of the latter, at its point of attachment to the abdomen, the wound was drawn inwards, making quite a deep cup-like cavity. This was kept open with carbolized lint; ordered an injection of warm castor oil (one ounce), which in an hour effected a copious and painless evacuation. The lower extremity of wound closing.

8th day. Emaciation of face marked, since yesterday; lint in the wound rapidly became offensive and required changing four or five times daily; patient takes a moderate quantity of nourishment.

10th day. She passed a bad night. The intestines became distended with gas, which caused more or less pain till three o'clock, A. M., when, after a copious alvine evacuation, she became comfortable, and slept till daylight. The patient looked badly, and had grown quite sallow and drowsy; moderate pain on pressure over the abdomen, significant of a low form of peritonitis; an opium suppository at noon. At 1.20 P. M. the patient suddenly began to sink; brandy was administered, but she did not rally, and died at 4.10 P. M.

Remarks. Should not every patient be tapped at some time previous to the time for the removal of the tumor, in order to add to the material to be considered in diagnosis? The information thus gained would be negative or otherwise. Take, for instance, a case like the one under consideration—an ovarian cystic colloid tumor, which, upon palpation, gave every indication of fluid contents. The rapidity of its growth, however, suggested the possibility of malignancy. Tapping would have revealed the fact that that which seemed to be fluid, was really colloid matter. Certainly the most practiced touch cannot discriminate between colloid matter and fluid, by palpation.



Chart, showing Pulse, Respiration and Temperature.

This assemblage of signs—rapid growth, fluctuation upon palpation, and the negative results of tapping, are elements in the diagnosis of colloid cancer, or colloid metamorphosis of an ovarian cystic tumor.

Is any portion of the intestine ever adherent to the abdominal wall in the line of the incision? It is well known that, in the progressive growth of ovarian cysts, the intestines are pushed backwards and are so found at the time of operating. Mr. Christopher Heath, however, in the "New Sydenham Society's Biennial Retrospect of Medicine and Surgery, 1871 and '72," records a case in which he operated for ovarian disease, and in enlarging the abdominal wound with scissors, divided in three-quarters of its circumference an empty coil of intestine which was closely adherent to the abdominal wall. He stitched the intestine to the abdominal wound, and so

formed an artificial anus. Mr. Heath remarks that he believes no similar case is on record. Should such an accident occur, he thinks the plan he adopted the best which can be carried out.

SECTIO CADAVERIS, — HOURS AFTER DEATH.

By I. N. DANFORTH, M.D.

Body much emaciated ; some post-mortem discolorations posteriorly ; rigor mortis slight. The wound was quite firmly united, with the exception of the middle third, from which the pedicle protruded. From this portion of the wound a dark-brown or blackish, thin fluid escaped, in small quantity, which was afterwards found to proceed from the degenerating stump of the pedicle.

Head.—Not examined.

Thorax.—Neither the lungs, heart nor great vessels presented any pathological lesions. Considerable post-mortem hypostasis of blood was observed in the posterior portions of the lungs, and recent heart clots, small, soft, and dark red, were found in both ventricles.

Abdomen.—The peritoneum was mainly healthy ; near the margin of the wound, however, traces of recent inflammation were apparent. In two or three places the coils of intestines were glued together by recent but easily disrupted adhesions. The abdominal cavity contained a considerable quantity of straw-colored serum, in which floated a few—but *only* a few—fibrinous flakes. It was found that the pedicle of the tumor was isolated or pocketed by adhesions extending quite around it, and that it (the pedicle) was situated in the centre of this pocket, or cup-shaped depression. It was bathed in a dirty dark-brown, thin fluid, but this fluid was not very offensive. As this peculiar substance was not met with elsewhere, I infer that it was the product of the strangulated portion of the pedicle. Stomach, small intestines, liver, pancreas, spleen and kidneys, healthy. The large intestine was also in a healthy condition, except that anatomical and physiological puzzle, the “appendix

vermiformis cæci," which was excessively distended by a deposit of colloid matter, precisely similar in gross and minute appearances to the matter composing the ovarian tumor, to the minute structure of which I shall allude more particularly hereafter.

The cavity of the uterus measured three and one-half inches in depth from the os to the fundus. The muscular wall of the uterus was considerably thickened, but otherwise healthy. The right ovary was gone, but in its place the stump of the pedicle was found, which was apparently healing kindly. The left ovary consisted mainly of a bunch of cysts, from the size of a small shot up to that of a grape; each cyst was filled with colloid material precisely like that composing the right ovarian tumor; that is to say, the Graafian follicles of the left ovary had already undergone colloid degeneration, and had started on the same career which proved so disastrous to the right ovary.

Projecting from the anterior superior wall of the uterus just below the fundus, and apparently imbedded in its muscular structure, I found a growth about the shape and size of a goose's egg, which had the appearance of being a cyst, although to the touch it was exceedingly dense and hard—harder, indeed, than any cyst I ever saw. Upon attempting to incise this mass my knife immediately came upon something which seemed to be bone. A longitudinal incision was now carried through the entire extent of the outside portion or fibrous covering, which was carefully dissected off so as to perfectly expose the bony mass. It proved to be the remains of a uterine fibroid which had undergone quite complete calcareous degeneration. The microscopic structure of the colloid material of which this tumor was composed, proved to be unusually simple. If a thin specimen be held between the eye and a strong light, it appears to consist of a structureless, jelly-like material, traversed by a multitude of parallel white lines. If a section be examined by a low power (a one-inch objective) these lines appear

to be made up of little granular bodies, arranged in regular rows, or files, but the intervening colloid material still appears hyaline and structureless; if the power be increased to 250 diameters, the rows of granules are seen to be rows of "cells"—that is, as we now understand the term. These cells possess neither "walls" nor nuclei; in fact, they are what would formerly have been called "free nuclei." Practically they are simply masses of germinal matter, engaged in the low-lived business of developing the so-called "colloid" material in which they are imbedded.

Clinics.

COOK COUNTY HOSPITAL.

Clinics for November. Surgical Department. Service of PROF. E. POWELL.

(Reported by F. C. WINSLOW, M.D., Assistant Physician.)

- I. Stricture of the rectum.
- II. Use of the warm bath.
- III. Degeneration of the tibia.
- IV. Caries of the astragalus.
- V. Keloid tumors.
- VI. Contusion of the genital organs—Retention of urine—Cystotomy.

I. *Stricture of Rectum.* The patient is a woman about twenty-five years old. She has had trouble in the rectum ever since she can remember. Has been troubled more or less with diarrhoea, the faeces being passed in small quantities and with difficulty. Examination reveals a stricture of the rectum two inches and a half above the anus through which it is impossible to pass the tip of the index finger. The stricture can be seen plainly with the aid of a Sims' duck-bill speculum, which instrument should always be used for inspection of the bowel. Malignancy is excluded, from the fact that a stricture

due to the presence of scirrhus would run its course more rapidly, and also from the absence of constitutional symptoms.

The treatment will be conducted upon the plan of dilatation, commencing with a No. 13 flexible urethral bougie and continued by the gradual substitution of larger sizes.

II. *Use of the Warm Bath.* In two cases where symptoms of hospitalism exhibited themselves following slight operations, the following course was pursued: The patient being at the time in a state of nervous irritation, tossing on the bed and complaining of pain, with a pulse 110 per minute and a temperature of 101 degrees, was stripped and placed in an alkaline bath as hot as could be borne, and at the same time potass. brom. gr. xl. was administered. He was permitted to remain in the bath twenty minutes, when he was placed in bed and warmly covered with blankets. Profuse sweating followed the treatment. The temperature came down to 98 degrees, and the patient sank into a refreshing sleep, lasting several hours.

The treatment was repeated every few days as it became necessary.

III. *Degeneration of the Tibia.* The patient is a young woman who received a slight injury upon the leg, six years ago. At present, the anterior aspect of the leg is the seat of a large ulcer, the surface of which is covered with loose, flabby granulations. The tibia was hypertrophied, and consisted of merely a shell of bony tissue upon the outside—the centre of the bone being occupied by a collection of fat and fibrous tissue, soft, friable, and easily scooped out with the “spud.” Amputation was advised, but the patient refused to submit to this operation.

IV. *Caries of Astragalus.* The right ankle was the seat of numerous small openings communicating with

the bone. The limb has been affected for over a year, commencing with pain and swelling, but without any injury having been received.

The patient is anæsthetized and a semicircular flap of integument raised from the internal aspect of the ankle. Examination showed the astragalus in a carious condition, the entire centre of the bone being softened, leaving only a thin shell of bone. It was decided to amputate the leg at the junction of the lower and middle third. The subsequent progress has been good.

V. *Keloid Tumors.* The affection exists in a negro about forty years of age. He has had the tumors over thirty years, and they are of all sizes, and located all over the neck, trunk, arms and legs. They are not painful, the principal inconvenience being an itching and burning sensation, prompting to constant scratching. One or two of the larger ones have taken on suppurative action, discharging a thin ill-smelling fluid. He is pretty well nourished, has a good appetite and sleeps well. Says that a good deal of his life has been spent in hard labor, but for the last few years he has not done much but try to cure himself. To this end he has visited watering places, bathing and drinking the waters, but has so far received no benefit.

In this case, excision is not practicable, as it would be necessary to skin the man in order to remove them all. He states that one or two have been removed, but quickly reappeared in the same place. He takes a warm bath daily, for the relief of the irritation of the skin, and beyond this nothing is being done for him yet.

VI. *Contusion of the Genital Organs—Retention of Urine—Cystotomy.* The patient was caught between the tiller of a canal boat and the side of the cabin, and suffered severe contusion of the penis and testicles. The accident occurred at 9 P. M., and the patient was brought in the following morning.

He had not passed urine since some time in the afternoon before the injury was received. He was in great distress, and examination revealed the fact that the penis, scrotum and perineum were infiltrated with urine. The operation of perineal section was performed, and the bladder emptied. On regaining consciousness the patient expressed the great relief he experienced as compared to his previous condition. Several free incisions were made in the penis, through which the infiltrated urine might escape. Owing to some tumefaction of the wound the urine was drawn for a few days by means of a flexible catheter introduced through the opening in the perineum. The case progressed without a single untoward symptom.

Editors' Book Table.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

THE REPORT OF THE CHICAGO RELIEF AND AID SOCIETY, OF DISBURSEMENTS OF CONTRIBUTIONS FOR THE SUFFERERS BY THE CHICAGO FIRE. Printed for the Chicago Relief and Aid Society, at the Riverside Press. 1874.

This Report constitutes an interesting chapter in the annals of Chicago, and a record of, perhaps, the grandest charitable impulse which ever stirred the sympathies of the world.

Beginning with a brief sketch of the history and topography of the city, and its condition at the time of the fire, to which is superadded a mere mention of the disaster itself, and a somewhat more detailed statement of its results upon the inhabitants, the Report proceeds to the narration of the measures taken for the care of the home-

less, the protection of life and property, and the re-establishment of the demoralized municipal government.

The record of the expressions of sympathy from almost every quarter of the habitable globe, is full of interest, and the telegrams and letters by means of which these expressions were conveyed, should be treasured most carefully among the choicest archives of the city, which will serve in the future as reminders of our duty to our neighbors, as stimuli to our charity to those in similar situation.

The Relief and Aid Society have done a noble work, and have done it nobly and faithfully. The amount of administrative ability brought into its organization and continued maintenance, must attract the admiration and merit the respect of the world ; and their "Report" will stand an enduring monument of charity, of fidelity and honor.

H.

We welcome with much pleasure to our exchange list a new medical journal from our sister Republic, Mexico. The first and second numbers of the "*Repertorio Jalisciense de Medicina y Cirugia Practicas*," have just made their appearance, under the dates Oct. 15th and Nov. 1st.

The Journal is a semi-monthly, having a numerous corps of contributors, *i. e.*: Messrs. Agraz, Arce, Arias, Benitez, Camarena, J. M., Clement, Fuentes I., Garcia-diego, Perez, Puga, Torres, y Zavala, and is published at the City Guadalajara, in the State of Jalisco.

Its original articles are highly creditable to their authors, and indicative of a high state of medical education in the city of Guadalajara.

We are glad to recognize the good example which is herein placed before us, in the attention given to the subject of Medical Meteorology, a subject destined to reward its diligent cultivators with results which will throw much light upon the laws governing the operation of etiological and epidemiological influences.

In this particular department of science our sanitarians

might take some valuable lessons from the carefully arranged meteorological tables of Senor Fuentes, in which not only the thermometric maximum, minimum and mean indication are registered, but also the barometric pressure, variations in atmospheric pressure upon the human body, the hygrometric condition, the rain-fall, the direction of the wind, and the state of the sky, are carefully recorded for collation with the tables of public health and mortality.

Senor Arce reports a case of successful ligation of the primitive carotid artery, necessitated by a gun-shot wound in the neck.

The Editors of the *Repertorio* are Srs. Clement, Director, S. Garciadiego, N. Puga, to whom we extend a cordial welcome into the field of journalism. H.

THE SCIENCE OF HOMŒOPATHY ; OR A CRITICAL AND SYNTHETICAL EXPOSITION OF THE DOCTRINES OF THE HOMŒOPATHIC SCHOOL. By *Chas. J. Hempel, M.D.*, Author and Translator of a number of standard works on Homœopathic Materia Medica and Practice, Honorary Member of several foreign and American Homœopathic Colleges and Societies. Bœricke & Tafel, New York, Philadelphia, Baltimore and San Francisco.

Although regarding this work from a point of view far removed from that occupied by the author, we nevertheless find ourselves in perfect agreement with some of his propositions. For example, in the first part of the work, in which the author discusses the "Philosophy of Homœopathy," and more especially that phase comprising the subject of infinitesimal doses, and "feels likewise called upon to testify to the efficacy of the higher preparations, even the two hundredth, of arsenic," etc., etc., etc., . . . "but is not prepared to assert that a lower preparation would not have acted equally well in the cases where these high attenuations produced positive and even brilliant results"—which, in our humble judgment, annihilates the whole theory of potencies.

As an illustration of the permissibility of palliative

treatment, on page thirty-three we are told that "a boy nine years old, with consumptive habit, was attacked with racking cough and fever," "had been sick some days," had "burning fever, paroxysms of racking cough, hectic flushes on the cheeks; great dyspnoea; marked dullness over the whole chest, especially over the upper lobes of the lungs, no respiratory murmur perceptible in the upper half of the chest; pulse 130; bowels constipated; urine scanty and cloudy; slight remission of the symptoms in the forenoon. I treated the child for a whole week with aconite, bryonia, phosphorus, arsenicum," etc., etc., . . . "without being able to effect the least improvement in the symptoms." . . . "At the request of the parents I gave the child a little morphine, in order to afford him some sleep, for which purpose I dissolved half a grain in ten teaspoonsful of water, of which solution the child was to take a teaspoonful (*one-twentieth of a grain*) every half hour until he dropped asleep." "On my next morning visit I was surprised to find the child not only alive, but sleeping sweetly," etc., etc. . . . "In a week after his improvement had commenced he was playing again in the open air,"—after which Homœopathy might exclaim, Save me from my friends!

Later, we are told, "There is a correspondence between the drug-germs in the crust of our planet and the morbid properties inherent in the tissues of the human organism." And again, "In order to cure a pathological disease, we apply to it the drug by which it is typified in nature"—which aphorism, we suppose, embodies the principle, "*similia similibus curantur*," and recalls vividly the same principles of therapeutics involved in some of the prescriptions contained in old Gervaise Markham, who tells us, "For broken bones, bones out of joint, or any grief in the bones or sinews, oil of swallows was pronounced exceedingly sovereign." The said oil of swallows was to be procured by "pounding twenty live swallows in a mortar," etc.

This looks like the "Doctrine of Signatures," of Oswald Crollius, revived, who taught that as "Walnuts are said to have the perfect signature of the head; the outer crust, or green covering, represents the *pericranium*, or outward skin of the skull, wherein the hair growth, and therefore salt made of those husks is exceedingly good for wounds in the head. The kernel hath 'the very figure of the brain,' and therefore it is very profitable for the brain, and resists poisons." In what does this differ from the dictum on page 63 of this "Critical and Synthetical Exposition": "the capacities of the specific drug powers in the crust of our planet correspond with specific capacities for disease, and that fully developed drugs correspond with fully developed diseases"?

On the same page we are told that "Vital Force" "is nothing less than the spiritual or living organism."

Of this book, we must be permitted to say that it must be studied in order to be fully appreciated. H.

CYCLOPÆDIA OF PRACTICAL MEDICINE. Edited by *Dr. H. Von Ziemssen*, Professor of Clinical Medicine in Munich, Bavaria.

Vol. I. Acute Infectious Diseases. By Prof. Liebermeister, of Tübingen, Prof. Lebert, of Breslau, Dr. Haenisch, of Griefswald, Prof. Heubner, of Leipzig, and Dr. Oertel, of Munich. Translated by R. H. Fitz, M.D., and Charles P. Putnam, M.D., of Boston; Arthur Van Harlingen, M.D., of Philadelphia; James T. Whitaker, M.D., of Cincinnati; Edward W. Schauffler, M.D., of Kansas City; and Francis Delafield, M.D., Horatio Bridge, M.D., J. Haven Emerson, M.D., Thomas E. Satterthwaite, M.D., Lewis A. Stimson, M.D., and Normand Smith, M.D., of New York.

Albert H. Buck, M.D., of New York, editor of American Edition. New York: Wm. Wood & Co. 1874.

The present volume initiates one of the greatest enterprises in the field of medical literature ever undertaken; by the side of which our old Cyclopædia of Forbes & Tweedie, and the more recent "System" of Reynolds, appear dwarfed. In no other land than Germany, perhaps, could the patient research, the plodding industry,

the unflagging zeal absolutely necessary to the accomplishment of such a task, have been found; and while awarding to the Germans full credit for the possession of all these qualities, we must at the same time especially commend the boldness of our countrymen, the translators, editor, and publishers, which has prompted them to give the work to the profession on this side of the water, contemporaneously with its appearance on the other—an enterprise which is peculiarly American.

Of the authors of the treatises which constitute the present volume, Prof. Lebert, of Breslau, is from his age and eminence best known upon this side of the water, more especially by means of his researches in the pathogenesis of tubercle and cancer. The name of Liebermeister is perhaps the next in the order of our acquaintance. The rest, however, have not been idle, and though yet young, have made their names familiar sounds to the German medical student.

The present volume comprises the subject of ACUTE INFECTIOUS DISEASES, and contains articles upon Typhoid Fever, both regular and irregular, and upon the Plague, by Liebermeister; upon RELAPSING FEVER, TYPHUS FEVER and CHOLERA, by Lebert; upon YELLOW FEVER, by Haenisch; upon DYSENTERY, by Heubner; and upon EPIDEMIC DIPHTHERIA, by Oertel.

These treatises are voluminous, constituting a volume of seven hundred pages, to which is appended a very complete and satisfactory index.

Liebermeister's treatise upon Typhoid Fever is comprehensive, and the views therein expressed in harmony with those of the best observers in England and in America, to whom, however, he does not refer, basing his conclusions upon evidence drawn almost exclusively from the observations of French and German authorities.

The specific distinctions between typhoid and typhus are well and clearly drawn, and the contagious character of the latter and the non-contagiousness of the former asserted.

The author's conclusions concerning the etiology of the disease are not as satisfactory as is desirable. He rejects the influence of exhalations from excrementitious deposits—sewers, privies, etc.—as efficient causes of the disease *per se*, but assigns this agency to these, and to the imbibition of water contaminated with these matters when containing the specific *typhoid poison*. Here he is guilty of a *petitio principii*. His theory necessitates the introduction of the specific poison as an essential factor. But from whence does he derive this essential factor? Just here the author leaves us, no closer to the origin of the disease than before, since he will not admit its production by the decomposition of excrementitious matters.

The relations of these causes to the disease are more fully determined, in considering the season of maximum prevalence of typhoid fever, which has been found to differ slightly in different localities. This difference has been found to correspond closely to the differences in the depth of surface soil covering deposits of decomposing organic matters, and also with the period of greatest dryness of atmosphere, and depression of water level in the soil.

These relations above noted do not differ essentially from those apparent to careful observers of the disease in this country. The correspondences of the ranges of temperature with those of the pulse, and the value of these correspondences as prognostic data, are fully set forth, and well illustrated by diagrams.

The description of pathological changes in the intestine, recognized as the essential lesion, and demonstrated by numerous autopsies, is elaborate and graphic. The chapter on prophylaxis is brief but comprehensive, and may be summarized in one sentence: "The points which should receive the greatest attention are drinking water and privies."

The discussion of treatment is very full and complete, including all, or nearly all, to be said upon the subject, one point therein deserving special attention, *i. e.*, the

favorable testimony which the author gives to the value of calomel and cold water, and the inutility of iodine. Quinine, veratria, and digitalis, as remedial agents, receive full consideration, but we must be permitted to say that the author's rules for the administration of the latter drug, digitalis, are by no means clear or satisfactory. On page 217 he says, "Digitalis is only to be used in those cases of typhoid fever in which there is no considerable degree of cardiac weakness, where the pulse is not yet extremely frequent, or, at least, is still pretty strong. The rule for its application is just the opposite to what it is in diseases of the heart; now the more frequent the pulse the less the digitalis is indicated. The impending paralysis of the heart is not prevented by the use of this drug, but seems rather to be favored thereby. No special harm is done, in patients with powerful action of the heart, if the administration of a large dose causes nausea and vomiting, of course the medicine must be then stopped." By comparison with the statements of the heart's action on page 82, and its histological changes on page 107, the paragraph quoted above seems somewhat discordant, and in view of the essential relations of cardiac weakness to typhoid fever, and clinical observation of the influence of digitalis in this and similar conditions, seems, to say the least, paradoxical.

There is one other point in the therapeutics, or rather the nutrition of cases of typhoid, to which we direct attention for the purpose of recording a dissent from the author's views, sustained as they are even by so high an authority as Stromeyer, that "Oaten grits is the best thing to give to typhoid fever patients." How such principles of dietetics can be reconciled with the essential pathology of this disease, as ably set forth by our author, in obedience to physiological laws, is incomprehensible. We venture the opinion that the ingestion of farinaceous food under the circumstances here assumed, would almost certainly establish or aggravate diarrhœa, and thus exhaust the patient, directly and indirectly.

Taken as a whole, the article on typhoid fever is interesting and valuable, and will well repay careful study.

The article by the same author, Liebermeister, on the Plague, is interesting historically, although it cannot be said to have much practical value in a portion of the earth where the disease has been hitherto unknown, and will probably never appear. The data furnished by the history of this disease, however, are important in this regard, that, when collated with those supplied by the history of epidemiology at the present time, they supply confirmatory evidence, if that were needed, of the absolutely protective influence of rigid hygienic and sanitary precautions, and strict isolation of the foci of disease. Every additional fact deduced from observation of epidemics in every quarter of the earth, and in every epoch of its history, tends to the truth of the proposition that diseases, like fires, must be fought in front, and that if we cannot cure some of them, we can at least prevent them, which is better.

The second article of the present volume is by Lebert, on Relapsing Fever, the original locality of which he assigns to Great Britain and Ireland.

The author's views of the etiology of relapsing fever may be epitomized by a single sentence, quoted from page 263. "Relapsing fever, since Obermeier's discovery, is certainly one of those infectious diseases for which a protomycetic origin has been most positively established," and "my assistants, Weigert and Buchwald, and myself have examined the blood in all cases of relapsing fever under my care, with the aid of strong immersion lenses, and have arrived at the conclusion that those protomycetes are never absent during the period of invasion and relapse, although they diminish very quickly after defervescence." Without attempting to discuss here the germ theory of disease, we will take the liberty to animadvert upon the superficial mode in which questions of this sort are in this, and in many another instance, decided, in utter defiance of any rules of logic.

That these "protomycetes" were invariably found in the blood of patients suffering from relapsing fever, is an isolated fact which admits of no deductions until collated with evidence which shall comprehend other sides of the subject. Nor is the additional statement, on page 264, that they "never have been found thus far in any other disease," sufficient to establish the author's opinions, for it is highly probable that they may not have been looked for as carefully under other circumstances.

The pathology of the disease, together with that of bilious typhoid, by some considered identical, is well described, as are also the history, geography, topography and symptomatology of the two diseases, comprising much valuable information, which will well repay attentive study.

The same author, Lebert, in his more elaborate article upon Typhus, indicates his adoption of the germ theory of disease in general, as we learn on page 304, where, in discussing its etiology, he uses the following language: "But that some such typhus-germ, of the fungus group, where microsphere, bacterium, or spiral formation, is the immediate cause, seems at least much more probable than any other idea."

The author assigns the birth-place of typhus to Ireland, and, of course, to be consistent with the germ theory, disputes the assertions of many Irish physicians, and of Virchow, that famine has any influence in the production of typhus. In considering the symptomatology of the disease, he asserts that petechial eruptions are present in eighty per cent. of the cases, and this fact seems to him an additional point of contact between this and the infectious exanthemata.

The sections on temperature, pulse and skin, are carefully prepared, though the discrepancy between the author's observations of temperature, and those of Wunderlich, are very striking. The affections of the nervous system are dismissed summarily, and indicate that the author has not regarded the disease very attentively from

this point of view. The sections on pathological anatomy, diagnosis and prognosis, are full and complete. Concerning treatment it may be said that the author places little reliance upon drugs, but much upon prophylaxis and hygienic measures. The only drugs indicated as valuable, are diffusible stimulants and quinine, with opium and morphine incidentally.

Lebert's treatise upon Cholera comprises a reliable account of the origin, history and progress of the disease so far as the successive epidemics in Western Asia and Europe have become the scenes of its ravages. Its appearance in North America is indicated in a paragraph of ten lines, and in this particular, as in all others, the authors of the different articles in this work ignore entirely the whole field of epidemiology in America. This cannot be regarded otherwise than as a defect in a work in many respects so admirable, as from the differences in physical geography, in climate, in topography, and soil, but above all else in social conditions and surroundings, the subject could not fail to present to the student in America data of great value in the formation of correct conclusions, and which might materially change those derived from observations made in other fields exclusively under conditions differing so widely.

The author asserts his belief, unequivocally, in the efficient agency of a cholera germ, and even attempts to identify it as belonging to the "protomycetes," and "probably to those of more rounded forms," to all of which assumptions we must interpose the Scotch verdict "non probatur." We do not deny the existence of cholera germs nor of typhus germs, etc., nor the array of facts adduced in support of the germ-theory, but until the missing links essential to the completeness of the chain of argument are supplied, they must remain in the category of unclassified facts. The symptomatology of the disease is well and clearly specified, although we would have been glad to see its neuro-pathological phase a little more minutely detailed.

The subject of Prophylaxis, international and local, is fully and satisfactorily discussed, and the "general regulations to be observed upon the appearance of cholera in a locality" clearly laid down.

- It is clear that the distinguished author places much more reliance upon prophylaxis than upon treatment, upon which subject his recommendations are rather negative than positive.

Lebert's great reputation must command for this portion of the work the attention of all earnest students of practical medicine.

One of the best articles in this volume is that upon Yellow Fever, by Haenisch, who has evidently studied carefully authorities upon this side of the ocean, making free use of the writings of La Roche and others. The author's analysis of the conditions under which the disease occurs and is propagated, is clear, and is sustained by the experience of observers who have had the opportunity to examine the disease in infected localities. The section upon treatment, is not so full nor so explicit as is desirable.

Heubner's article on Dysentery and that of Oertel on Diphtheria conclude this first volume of the series.

Of the first, we may say that the author seems less under the domination of preconceived ideas than are some of his collaborators, and hence is less dogmatical in his assertions. The historical portion of his article is especially interesting. Concerning treatment, this author, too, is disposed to rely largely on prophylaxis and general principles, and we are inclined to think that this disease, as it has presented itself to him, must have assumed a milder type than that which will be found to characterize it as occurring in the practice of his American readers.

Oertel, in his article upon Diphtheria, proclaims his allegiance to the germ-theory in these words, quoted from Eberth, "*without micrococci there can be no diphtheria,*" and farther, in the same paragraph, proclaims his adhe-

rence to that of spontaneous generation, in asserting that the question, "whether they (bacteria) form in the blood as does acetic acid in alcohol," . . . "in the present state of scientific knowledge must be left undetermined."

Aside from the author's assumptions regarding the etiology of disease, his treatise will well repay careful study; it is systematic, and concise, and at the same time elaborate and detailed. Its pathology, both direct and incidental, is copiously presented, and the treatment consistent and rational.

This article, on the whole, presents evidences of more extensive scientific culture and thought than any of the series.

It is impossible to give further space within our brief limits to the consideration of the great work whose examination has already occupied so much of our space belonging to other matter.

We have been somewhat elaborate in its review from the desire to call the attention of the profession generally to it, in the hope that they would study for themselves, and approve or disapprove, according to their own judgment, our criticism or praise.

The paper, typography and mechanical work of the volume are excellent and beyond criticism. II.

BOOKS RECEIVED.

OUTLINES OF THE SCIENCE AND PRACTICE OF MEDICINE. By *William Aitken, M.D., F.R.S.*, Professor of Pathology in the Army Medical School, etc., etc. London: Charles Griffin & Co. Philadelphia: J. B. Lippincott & Co. 1874.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE, for the use of Physicians and Students. By *James Tyson, M.D.*, Hospital Lecturer on Pathological Anatomy in the University of Pennsylvania, etc., etc. With a plate, and numerous illustrations. Philadelphia: Lindsay & Blakiston. 1875.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS. Delivered at the University College Hospital, by *Sir Henry Thompson*, Surgeon Extraordinary to his Majesty the King of the Belgians, etc., etc. Second American, from the third and revised London, Edition. Philadelphia: Henry C. Lea. 1874.

THE MEDICAL USES OF ALCOHOL AND STIMULANTS FOR WOMEN. By *James Edmunds, M.D.*, Member of the Royal College of Physicians of London, Member of the Royal College of Surgeons of London, etc., etc. New York: National Temperance Society and Publication House. 1874.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by *Dr. H. Von Ziemssen*, Professor of Clinical Medicine in Munich, Bavaria. Vol. I, Acute Infectious Diseases. By Professor Liebermeister, of Tübingen, Professor Lebert, of Breslau, Dr. Haenisch, of Griefswald, Prof. Heubner, of Leipzig, and Dr. Oertel, of Munich. New York: William Wood & Co. 1874.

A SPECIFIC DIAGNOSIS OF THE STUDY OF DISEASE, with Special Reference to the Administration of Remedies. By *John M. Scudder, M.D.*, Professor of Pathology and Practice of Medicine in the Eclectic Medical Institute. Cincinnati: Wilstach, Baldwin & Co. 1874.

EXAMINATION OF THE URINE. By *George B. Fowler, M.D.*, Examiner in Physiology, College of Physicians and Surgeons, New York; Fellow of New York Academy of Medicine, etc., etc. New York: D. Appleton & Company. 1874.

ORTHOPÆDIA, OR A PRACTICAL TREATISE ON THE ABERRATIONS OF THE HUMAN FORM. By *James Knight, M.D.*, Member of the Medico-Chirurgical Faculty of Maryland, the District Medical Society of Ohio, and the County Medical Society of New York; Physician and Surgeon in charge of the Hospital of the New York Society for the Relief of the Ruptured and Crippled, New York City, etc., etc. New York: G. P. Putnam's Sons. 1874.

CATALOGUE of the Specimens in the Pathological Museum of the Philadelphia Hospital.

PAMPHLETS RECEIVED.

THE DRIFT OF MEDICAL PHILOSOPHY. An Essay, by *D. A. Gordon, M.D.* Philadelphia: J. B. Lippincott & Co. 1875.

NINETY-SECOND ANNUAL CATALOGUE of the Medical School (Boston) of Harvard University. 1874 and '75.

AN ACCOUNT OF THE EPIDEMIC OF CHOLERA, during the Summer of 1873, in Eighteen Counties of the State of Kentucky. By *Ely McClellan, M.D.*, Asst. Surg. U. S. A. Cambridge: Printed at the Riverside Press. 1874.

ADDRESS, delivered before the American Academy of Dental Science at their Seventh Annual Meeting, held in Boston, Sept. 28, 1874. By *Dr. W. W. Allport*.

ADDRESS, delivered before McDowell Medical Society of Kentucky, at its Semi-Annual Meeting, in Madisonville, Ky., Nov. 4, 1874. By *W. T. Briggs, M.D.*, of Nashville, Tenn.

CLINICAL UREAMETRY. By *Henry G. Piffard, M.D.*, Surgeon of the Charity Hospital, Clinical Professor of Dermatology, Medical Department of the New York University. Reprinted from the New York Medical Journal, Dec., 1874. New York: D. Appleton & Co. 1874.

KOUMIS, AND ITS USES IN MEDICINE. By *Victor Jagielski, M.D.*, of Berlin, late Superior Physician in the Prussian Army. Chicago: Published by A. Ahrend, Chemist, 521 W. Madison street. 1874.

SEVENTH ANNUAL REPORT of the Central Free Dispensary of West Chicago, for the year ending June 30th, 1874.

REPORT of the Committee on Idiocy, made to the Illinois State Medical Society at the Annual Meeting held in Chicago, May, 1874.

JOURNALS RECEIVED.

The American Practitioner, Louisville—November, December.

The American Medical Weekly, Louisville—November 21, 28, December 5, 12, 19.

The Abstract of Medical Sciences—Vol. 1, July to Dec., 1874.

The Boston Medical and Surgical Journal—December 1.

The Boston Journal of Chemistry—December.

The Clinic, Cincinnati, Nov. 21, 28, Dec. 5, 12.

The Cincinnati Lancet and Observer—December.

The Clinical Record, Missouri—December.

The Canada Lancet—December.

The Canada Medical and Surgical Journal—December.

The Druggists' Circular—December.

The Detroit Review of Medicine and Pharmacy—December.

The Dental Cosmos—December.

Journal de l'Anatomie et de la Physiologie de l'homme et des Animaux. Charles Robin—Nov. and Dec.—No. 6.

The London Lancet—November, 1874.

The Laboratory, Boston—November.

The Medical Herald, Kansas City—Nov., Dec.

The Medical Examiner, Chicago—Nov., Dec. 1 and 15.

The Medical Record, New York—Nov., Dec. 1.

The Medical and Surgical Reporter, Philadelphia—Nov. 21, 28, Dec. 5, 12, 19.

The Medical Times, Philadelphia—Nov. 21, Dec. 5, 12, 19.
The Medical Press and Circular, London—Nov., 18, 25.
The Medical Record, New York (weekly)—Dec. 1.
The Medical News and Library and Supplement—December.
The Nashville Journal of Medicine and Surgery—Dec.
The New York Medical Journal—December.
The Ohio Medical and Surgical Reporter—November.
The Pacific Medical and Surgical Journal—Nov., Dec.
The Psychological and Medico-Legal Journal—Nov., Dec.
The Practitioner, London—Nov.
Le Progres Medical—Nos. 41, 42, 43, 44, 45.
The Physician and Pharmacist—November.
The Pharmacist, Chicago—December.
The Peninsular Journal—December.
The Richmond and Louisville Medical Journal—Nov.
Repertorio Jalisciense de Medicina y Cirurgia Practicas—Numero
1 and 2—Guadalajara. 1874.
The Sanitary Journal, Toronto—Nov.
The St. Louis Medical and Surgical Journal—Dec.
The Southern Medical Record—November.
The Technologist, New York—Nov.
The Virginia Medical Monthly—Dec.

Editorial.

The Concours for the position of Lecturer on Obstetrics in the Spring Faculty of Rush Medical College which was opened at the College on the evening of Tuesday, Dec. 8th, and continued on the 9th and 10th, was finally concluded upon the evening of Friday, Dec. 11th, in a manner as unexpected as gratifying to all concerned.

The announcement of the Concours had excited more general attention and interest than those which had preceded it, as it was recognized as an expression of the determination of the Faculty to fill up vacancies in their ranks by the test of merit alone.

Fourteen applications were made for admission to the Concours ; four of these, however, were subsequently withdrawn, leaving but ten who actually competed for the position. To these, subjects were assigned, and one

week granted for preparation of the lectures, which were delivered in the following order :

TUESDAY.

DR. C. W. EARLE — Phlegmasia Dolens.

“ C. T. FENN — Obstetric Forceps.

“ J. S. KNOX — Histological Anatomy and Functions of Placenta.

WEDNESDAY.

DR. W. C. LYMAN — Abortion.

“ A. VON MANSEFELDE — Retained Placenta.

“ W. P. PEIRCE — Conception and Early Development of the Ovum.

THURSDAY.

DR. G. F. ROBERTS — Unavoidable Hæmorrhage.

“ A. K. STEELE — Eclampsia Parturientium.

“ E. W. SAWYER — Post Partum Hæmorrhage.

“ G. D. WILBUR — Puerperal Mania.

Thus far the Concours had proved a most agreeable surprise to the entire audience, composed of the professional men of the city and students, and it is extremely doubtful if as great a number of lectures of so high a degree of excellence, evincing so much intellectual power and professional erudition, have ever been delivered upon a similar occasion in this country.

In Dr. Earle we recognized the dignity and power of the experienced teacher, who, while already holding a full professorship in another college, still considered a lectureship in Rush Medical College a prize worth striving for.

Dr. Fenn, also a lecturer of some years' standing, exhibited in his lecture upon the Obstetric Forceps, the evidences of patient and laborious study, and the pluck which never recognizes defeat.

The lecture of Dr. Knox was a masterpiece of scientific accuracy, couched in “English pure and undefiled,” delivered with elegance of style and ease of manner, which made listening a pleasure.

Dr. Lyman presented the subject of abortion to his auditors in a most earnest and impressive manner, characterized by the evidences of profound thought and careful study.

Dr. Von Mansfelde's illustrations of the modes of "placental retention" were graphic and instructive, and were closed with a graceful compliment to his Alma Mater.

Dr. W. P. Peirce, in his demonstration of "Conception and the Early Development of the Ovum," betrayed in the manner the experienced teacher, and in the matter the skilled practitioner who had "thought out for himself" many of the knotty problems in physiology as well as practical medicine. His lecture was well illustrated by some excellent original diagrams, and illuminated with flashes of humor which won for him many votes among the benches.

Dr. G. F. Roberts, one of Rush's youngest alumni, gratified his old teachers by demonstrating practically, the excellence of their instructions, in the admirable manner in which he discussed the subject of "Unavoidable Hæmorrhage," and satisfied the Faculty that there is among the old pupils a powerful reserve force to sustain the reputation of the old school unimpaired.

Dr. A. K. Steele's thorough practical familiarity with his subject, "Eclampsia Parturientium" and especially with its symptomatology and therapeutics, soon proved to all that he was to be one of the winners, and its continuation and close left that impression strengthened in the minds of many of his auditors.

Dr. E. W. Sawyer elucidated the subject of "Post Partum Hæmorrhage" in a manner which surprised and delighted his hearers. The comprehension and accuracy of his knowledge, the clearness of his style, and the precision of his system, displayed the accomplished scholar and the trained thinker.

Dr. G. D. Wilbur had the distinction of closing this stage of the Concours by an admirable lecture on "Puerperal Mania," in which, although last, he proved himself by no means least.

But the Concours was not yet over, the struggle not yet terminated. Out of the ten competitors four were

selected "*pares inter primos*," and between these the Faculty found it impossible to decide to whom the prize should be awarded, and the application of still another and a more severe test became necessary to determine the victory.

Titles of subjects were written upon separate slips of paper, placed in a hat, and from this hat the four selected at the previous trial were required to draw each in his turn a slip, and announcing the inscribed title, to proceed at once to lecture upon the subject thus assigned him by dame Fortune.

The subjects thus assigned were—

TO DR. J. S. KNOX — Rupture of the Uterus.

TO DR. E. W. SAWYER — Anatomy of the Female Pelvis and its Deformities.

TO DR. G. F. ROBERTS — Inversion of the Uterus.

TO DR. A. K. STEELE — Labor in Face Presentations.

There are few physicians, however great their skill, or however extensive or prolonged their experience, who would not shrink from an ordeal so severe, and still fewer who, having made the essay, would not utterly fail. It was truly an "*experimentum crucis*," and no small meed of praise should be theirs who, having been found worthy, even dared the trial.

That three should fail, no, not fail, for such men never fail—should not succeed, was inevitable, as there was but one prize; had there been four, the success of each and every one had been secure.

Out of this trial two came unscathed, and the only regret felt and expressed by the judges in awarding the lectureship to Dr. Sawyer, was the necessity of withholding it from Dr. Knox.

On several occasions this JOURNAL has taken the liberty to animadvert upon the low estimate at which the medical profession is held by the civil—we should rather say the political—authorities, and also to some of the causes which have induced this result. One of

these was indicated in our pages in the early portion of the past year, to be the unseemly haste manifested by certain physicians to rush into the arena of politics and to struggle for the prizes of petty offices which, in the majority of instances, are only the first steps in the direction of professional demoralization.

There are certain offices in the gift of the county and municipal authorities which can only with propriety be filled by medical men. We refer to those of City and County Physicians, Sanitary Superintendent, and Coroner. The first three of these are so filled, and we believe well filled, fortunately for the public, although by no means fortunately for the incumbents, who find themselves in positions involving grave professional and civic responsibilities and very arduous labor, with authority by no means adequate, and compensation totally inadequate thereto. The duties of the office of Coroner can be satisfactorily filled by a thoroughly educated physician only, and by no one else.

No degree of intelligence or general culture, no amount of energy or fidelity, will compensate for the technical education acquired by physicians only—an education enabling them to recognize and appreciate a class of facts unappreciable otherwise.

The office of Coroner, rightly administered, might and should constitute one of the corner stones of the whole system of criminal jurisprudence, instead of, as hitherto, a butt for the shafts of well merited ridicule, till “crown-er’s-quest law” has come to be a synonym of burlesque from the days of Shakespeare until now.

The verdict of a Coroner’s jury as at present constituted, consists, not of the logical conclusion of twelve intelligent men, based upon the *facts* submitted to their consideration, in the evidence set before them, but the *opinion* of the county physician or of some other medical gentleman who may have some knowledge of the case. Nine times out of ten, the “intelligent jury” gathered from the neighboring bar-rooms and express wagons,

render as their verdict these *opinions* verbatim—from utter inability, through ignorance, to comprehend the facts, and to come to any independent conclusion.

Just so long as the authorities offer and pay for medical services compensation about equivalent to what is paid for the simplest forms of unskilled labor, and make the office of Coroner the reward of political services, just so long will the operations of public justice be completely obstructed in this direction, and many a crime remain concealed, which under a more enlightened and liberal system of medico-legal investigation would be brought to light.

H.

Book-keeping.

Those of our readers who have done us the kindness to borrow from our exchange files the following Journals, will add to the obligation by returning the same at their earliest convenience :

Boston Medical and Surgical Journal, Sept., '73, July, Aug., Sept., Oct., '74.

Philadelphia Medical and Surgical Reporter, vol. xxx, Nos. 22, 23, 24 ; vol. xxxi, Nos. 12, 14, 21, 22.

Atlanta Medical and Surgical Journal, May and September, '74.

American Practitioner, Feb., May, Aug., '74.

New York Medical Journal, May, July, Aug., '74.

Philadelphia Medical Times, Nos. 105, 131, 141, 148, 152, 155, 160, 161.

The Illinois Charitable Eye and Ear Infirmary.

This institution now occupies its new building, corner of Adams and Peoria Streets, Chicago. The edifice, 105 feet long by 47 feet wide, consisting of a basement and four stories with a mansard roof, presents a most attractive appearance. It is an ornament to the portion of the city in which it is situated.

The accommodations for the treatment and comfort of

patients are equaled by those of no similar institution in the country.

From the Seventeenth Annual Report we learn that during the past year 1,012 patients were treated gratuitously, making an aggregate of 10,620 patients that have received the benefits of the Infirmary since 1858, the year of its foundation.

The following is a form of certificate which will admit any poor patient residing in Illinois to the Infirmary, or gratuitous treatment and board :

This is to Certify, that ———, of the Town of ———, County of ———, State of Illinois, is absolutely without means to pay for his (*or* her) board or treatment at the Illinois Charitable Eye and Ear Infirmary.

Form of certificate which will admit any poor patient to the Infirmary for gratuitous treatment :

This is to Certify, that ———, of the Town of ———, County of ———, State of ———, is in indigent circumstances, and can pay his (*or* her) board alone, but not for treatment, at the Illinois Charitable Eye and Ear Infirmary.

Either form of certificate must be signed by some respectable physician, or Supervisor, or Clerk of the County Court, where the patient resides.

Neither of the above certificates should in any case be given to a patient unless he be destitute of means.

The Dispensary of the Infirmary is open daily from 2 to 2½ P. M., for such poor patients, not boarding at the Infirmary, as may require treatment.

Chicago Mortality Report for November, 1874. Reported by
Dr. BEN. C. MILLER, Sanitary Superintendent.

MORTALITY IN MONTH OF NOVEMBER.

Abscesses	1	Anæmia	1
“ of peritoneum	1	Aneurism of aorta	1
Accident, burns by kerosene	1	Anus imperforate	1
“ crushed	1	Apoplexy	2
“ by drowning	1	Asthma	1
“ by fall	3	Bowels, intussusception	1
“ thrown from buggy	1	Brain, abscess of	1
“ by suffocation	2	“ congestion of	8
“ by railroad	2	“ inflammation of	4
“ by street cars	2	“ irritation of	1
Abortion by self	1	Bronchitis	6

Bronchitis, capillary.....	6	Heart, rheumatism of.....	1
Biliary calculi.....	1	“ valvular disease of.....	6
Cancer.....	1	Hemiplegia.....	1
“ of breast.....	2	Hepatitis.....	1
“ of bowels.....	1	Hernia.....	1
“ of liver.....	2	“ strangulated.....	1
“ pyloric.....	1	Hydrothorax.....	1
“ pelvic.....	1	Hydrocephalus.....	6
“ of rectum.....	1	Inanition.....	5
“ of stomach.....	2	Intemperance.....	2
“ of uterus.....	4	Jaundice.....	1
Cholera infantum.....	5	Kidneys, disease of.....	1
Consumption.....	52	“ and bladder, disease of.....	1
Convulsions.....	50	“ Bright's disease of.....	3
“ puerperal.....	2	Laryngitis.....	1
Croup.....	7	Liver, congestion of.....	1
“ membranous.....	2	“ induration of.....	1
Cyanosis.....	1	“ stricture of.....	1
Cystitis.....	1	Lungs, congestion of.....	9
Debility, general.....	3	“ apoplexy of.....	2
Delirium tremens.....	1	“ hemorrhage of.....	1
Deficient development.....	1	“ gangrene of.....	1
Diabetes.....	1	“ cedema of.....	1
Diarrhoea.....	4	“ abscess of.....	2
“ chronic.....	2	Mania, puerperal.....	1
Diphtheria.....	15	Measles.....	1
Dropsy, general.....	3	Meninges, inflammation of.....	1
Dysentery.....	2	Meningitis.....	6
Endo carditis.....	1	“ cerebro-spinal.....	8
Enteritis.....	9	Metritis.....	1
Enterocolitis.....	2	Old age.....	15
Epilepsy.....	1	Paralysis.....	2
Erysipelas.....	2	Peritonitis.....	3
Exposure.....	1	Pneumonia.....	24
Exhaustion.....	3	“ typhoid.....	1
Fever, puerperal.....	2	Rupture of aorta.....	1
“ remittent.....	1	Scrofula.....	2
“ scarlet.....	11	Suicide, by laudanum.....	1
“ “ malignant.....	1	“ poison.....	2
“ typhoid.....	25	Syphilis.....	1
Gangrene.....	1	Tabes mesenterica.....	15
Gastritis.....	2	Teething.....	1
Gastro enteritis.....	3	Tumor.....	1
Hemorrhage funis.....	1	Uterus, hemorrhage of.....	1
Hemorrhagica purpura.....	1	Vitality, deficient.....	1
Heart, aneurism of.....	1	Whooping cough.....	4
“ disease of.....	4		
“ enlargement of.....	2		
“ organic disease of.....	1		
		Total.....	436

Premature births, 7; Still births, 61. Total..... 68

COMPARISON.

Deaths in month of November, 1874.....	436
“ “ October, 1874.....	570
Decrease.....	134
Deaths in month of November, 1873.....	549
Decrease.....	113

AGES.

Under one year.....	119	Thirty years to forty.....	45
One year to two.....	36	Forty " " fifty.....	31
Two years to three.....	26	Fifty " " sixty.....	21
Three " " four.....	8	Sixty " " seventy.....	25
Four " " five.....	2	Seventy " " eighty.....	21
Five " " ten.....	23	Eighty " " ninety.....	5
Ten " " twenty.....	23	Ninety " " one hundred.....	3
Twenty " " thirty.....	48	Total.....	436
Males.....	233	Colored.....	7
Females.....	203	White.....	429
Total.....	436	Total.....	436
Married, 164; Single, 272.	Total.....		436

NATIVITIES.

Belgium.....	2	Holland.....	3
Bohemia.....	5	Ireland.....	43
Canada.....	6	Norway.....	5
Native—Chicago.....	46	Nova Scotia.....	2
Foreign, ".....	137	Poland.....	1
United States, other parts.....	87	Scotland.....	2
Denmark.....	2	Sweden.....	7
England.....	15	Switzerland.....	1
France.....	1	Wales.....	2
Germany.....	64	Unknown.....	5
		Total.....	436

Deaths daily, 14½. Mean temperature, 40.4°. Rain fall, 2.72 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	5	5,725	one death in 1,145
2	1	4,830	" " 4,830
3	15	14,861	" " 991
4	14	15,361	" " 1,097
5	18	20,078	" " 1,115
6	47	35,916	" " 764
7	35	31,722	" " 906
8	28	29,143	" " 1,041
9	34	31,654	" " 931
10	11	17,385	" " 1,580
11	9	14,022	" " 1,558
12	11	16,792	" " 1,527
13	14	17,892	" " 1,277
14	12	16,720	" " 1,338
15	59	45,545	" " 772
16	23	21,922	" " 953
17	17	20,777	" " 1,234
18	21	21,392	" " 1,019
19	4	4,677	" " 1,169
20	7	8,995	" " 1,285

385 Ratio of deaths to population in 1874, one death in 907.

No. deaths in Wards.....	385	Old Ladies' Hospital.....	1
Accidents.....	13	St. Joseph's Hospital.....	1
Alexian Bros. Hospital.....	1	St. Luke's Hospital.....	2
County Hospital.....	9	Suicides.....	3
Foundlings' Home.....	15	Woman's Hospital.....	1
Hospital for Women and Child'n.....	2		
Mercy Hospital.....	3	Total.....	436

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ARTICLE I.

THE MEDICAL EXPERT AND MEDICAL EVIDENCE.

BY M. A. MCCLELLAND, M.D., KNOXVILLE, ILL.

(Continued from page 28.)

WHO ARE MEDICAL EXPERTS?

This is a vexatious question. As questions in medicine are the most common, and frequently the most important, involving matters of property, reputation, and, indeed, life and death, its proper solution is of the greatest importance. In the first place, Who are physicians? In some countries the question is answered by the statutes. In the United States, "proof that one practices as a physician is *prima facie* evidence of his professional character," (*Sutton v. Tracy*, 1 Mich. 243), but only as "to the business in which the plaintiff was engaged, rather than to the degree of skill with which he exercised it." That a person practices medicine is no proof of *skill* is now being recognized by statutory enactments in

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various States, requiring persons practicing medicine to be in possession of some evidence of their qualification, in the form of a diploma or license from an examining board of physicians. It will be seen, however, from what has been before said, that the possession of these evidences of capability to practice does not confer *ability* to act creditably as an expert.

"In forensic-psychology an expert must be skilled (1) in law, sufficient to determine what is the 'responsibility' which is to be the object of the contested capacity; (2) psychology, so as to be able to speak analytically as to the properties of the human mind; (3) medicine, so far as concerns the treatment of the insane, so as to speak inductively on the same subject. If either of these factors is wanting, a witness cannot be technically an expert." (Wharton and Stille, Med. Jurisp., Book 1, § 275.) This is a very high standard, and practically is not observed. Courts have modified it, and in doing so have fallen into the other extreme, permitting many persons to testify who are not competent to do so. They ignore the fact that he only is an *expert* who is *instructed* in any science, art or trade, by *study* and *experience*. See *Fairchild v. Blascomb*, 35 Vt. 390, where it was held that *nurses*, accustomed to attend the sick, were *competent* experts in respect to mental conditions. In *State v. Hinkle*, 6 Iowa, 380, it was held that an ordinary physician, at least not an analytical chemist, was capable of analyzing the contents of a stomach of one supposed to be poisoned. Similar rulings may be found in other States. Why should they be "highly regarded"?

In cases of insanity, however, the rule for requiring that experts shall have made the subject of mental disease a special study, is pretty generally insisted upon, especially in the higher courts. In many of our States, patients, supposed to be insane, cannot be committed to hospitals or other places of confinement, without a preliminary examination before one of the lower courts. In this examination, one or more physicians are summoned

to appear to act as juror or witness. Ordinarily physicians are exempt from jury duty ; in this case the duty is imperative. The necessity for this judicial investigation, *ab initio*, has arisen from a suspicion that sane persons have been thus imprisoned, so that some dishonest relative might be better able to carry on some scheme of iniquity. This suspicion is kept alive in the minds of the community by such sensational efforts as are manifested in the "*Terrible Temptation*" of Charles Reade. I was about to mention, also, "*Behind the Bars*," but I am not acquainted with its tendencies. Physicians will readily call to mind the "sensation" created a few years ago by the publication of a book that purported to give the history of a number of persons unjustly confined in one of our State institutions. It is needless to state that the charges made in it had no foundation in fact.

The true preparation for this duty, as Dr. Ray remarks, (Med. Jurisp. of Insanity), "lies in observation and study of mental phenomena, as strikingly exhibited in real life." A large acquaintance with mental phenomena, in a sound as well as unsound state, a comprehensive knowledge of the various faculties of the mind, is desirable, as being cumulative, but this the ordinary physician, pressed by other and more frequently occurring duties, cannot acquire, so he must be content to occupy the position of an ordinary witness, declining to pass upon graver questions, on the plea of want of necessary study. In *Baxter v. Abbott*, 7 Gray, 71, it was held, "that a physician who had lived in the neighborhood of the testator, and had at times been his medical adviser, but who never had had charge of insane persons, except to advise that they be removed to an asylum, was competent to give an opinion as to the sanity of such testator." Again, it has been held, "that a physician who had not made insanity a special study, was not competent to testify as an *expert* in insanity upon a hypothetical case submitted to him, nor to give his opinion whether the prisoner, who had lived near him, and whom he had

long known, but who had never been his patient, was competent to apply the rules of right and wrong." (*Com. v. Rich*, 14 Gray, 335.) In *State v. Windsor*, 5 Harr. 512, it was held, "that medical men in general were competent to express an opinion, on hearing all the evidence, as to the state of a prisoner's mind." On the other hand, (*Fairfield v. Bascomb*, *supra*), it seems that a physician "who had for more than thirty years given especial attention to the treatment of the insane, could not be admitted to testify, as an *expert*, as to the mental capacity of a person not previously insane, but in the last stages of disease."

"A singular decision was lately rendered in the Supreme Court of Massachusetts. The case under consideration was the pollution of Mystic Pond, the water supply of Charleston, by the influx of tannery refuse. Three chemical experts gave their testimony, among them Prof. Benj. Silliman. But Prof. Silliman, besides being a chemist, holds the degree of M.D., and his testimony in the latter capacity, as to the effect of decaying organic matter in water, on the health of those who drink it, was offered in court. It was, however, refused, on the ground that Dr. S. was not a practicing physician. The absurdity of the ruling becomes all the more apparent when it is known that Dr. S. has, for many years, been a professor of medical chemistry." (*Galaxy*.)

It is evident that the courts have not succeeded in establishing a positive rule as to who are experts.

A writer in the *American Law Review*, April, 1871, to whom I am indebted for many of the preceding citations, remarks farther :

"Titles, diplomas, occupations, and professional reputations, have no judicial weight or meaning, and are of use only so far as they serve as guides in particular cases. It is purely matter of discretion how much importance shall be attached to them."

He gives as a reason for these adverse rulings, that "Courts are continually forced to decide, on the spur of

the moment, upon the pretensions and claims to credit, of persons offered as *experts*, often upon the most abstruse and difficult subjects."

In this day of "Eclectic" Universities, and degrees *in absentia*, I would suggest—believing that a *diploma* is some evidence of attainments—that the following questions be propounded the witness, under oath: Are you a graduate in medicine? and if so, did you obtain your degree by following out the course of study required by the majority of medical schools? and if so, were you examined upon those studies by the gentlemen whose names are upon your diploma?

The Hon. Emory Washburn, in a paper read before the American Academy of Arts and Sciences, (*American Law Review*, vol. 1, p. 61), says: "When a man is offered to testify as an expert, it is the duty and province of the judge to determine, upon evidence and inquiry, whether he answers to that description or not. Now, what is wanted in an expert is, first, that he should be sufficiently acquainted with the subject matter upon which he is called, to *know* what its laws are; and, in the second place, he should be honest and impartial enough to state his opinion or judgment upon these fully and fairly, so far as it can be done, and how they bear upon the issue to be tried. He should not be selected as the witness of this party or that, or to represent this view or that, of the matter in controversy. He should be like an arbitrator or a commissioner, who, standing indifferent between the parties, is to hear the facts which they have to offer; and then, by applying his own knowledge as a man of science, to form an opinion, and declare it, as a guide for the court and jury in forming a final judgment in the cause.

"I would, therefore, have experts selected by the court, as they appoint auditors to determine matters of account; or commissioners to take testimony, or to make partition of estates; or other like agents and instrumentalities in the administration of justice. Under such a rule, there

would not, ordinarily, be any great difficulty in the parties themselves selecting who should be thus employed. And if there was, the very fact that one party or the other insisted upon a favorite witness, would be sufficient to put the court upon their guard in allowing him to act as such. The subjects upon which experts may be called are as numerous as the departments of business, and the transactions of life, in which laws and rules of action are applied. But the number of experts in any one department is ordinarily small, and easily distinguished. Who those are, in any district or region, and what are their relative character and fitness to act, can be ascertained by the court without any great difficulty, in each case as it arises. And though cases may occur where, by the selection or exclusion of one or another who may be named an expert, injustice may be done to a party, the great cause of justice will, on the whole, be vindicated, and the confidence of the public in the purity of its administration, as well as their respect for its ministers and instrumentalities, strengthened and confirmed."

Dr. Ray, (Contributions to Mental Pathology, pp. 422—424), after adducing many weighty reasons why experts should not be appointed by the Executive, says, in regard to their being selected by the court, he sees nothing in favor of *this* course, "beyond the chance of securing a higher degree of honesty and competence." Farther along he admits that the appointment of an expert by the Executive has its advantages, viz: "Skilled testimony on any subject, thus obtained, is free from the objections made against it as it is usually obtained. It is not given in the interest of one party or the other; it is unbiased by any pecuniary arrangements, and it escapes the damage of a cross-examination. It is the *well-matured* conclusions of a calm, deliberate, thorough investigation."

He favors the system in use in Germany and France, which is very similar to the one advocated by Professor Washburn. Dr. Ray qualifies his preference by saying:

"But it must be borne in mind that in Germany, for the most part, there is no trial by jury; and that in France a criminal case passes through its most decisive stages before it is submitted to a jury."

It has been said that neither "quacks" nor mere speculative theorists are to be received as experts. But who will draw the lines of distinction here? The Supreme Court of New York, in the case *Ex parte Paine*, 1 Hill, 665, tried to do it, and failed by not being comprehensive enough. It designated as such, "whoever offers to practice either homœopathy or allopathy, as his patients may wish;" which is very true, and yet such a person might make a very good *expert*. Why exclude him, when others are permitted, no more honest than he is? Inasmuch as the law recognizes no "schools," and it has been decided that a physician must be governed by the rules of that "school" he professes, (*Bowman v. Woods*, 1 Iowa, 441), it would seem that the testimony of experts, selected from one school, should not be received to impugn the professional rules and practice of practitioners of another "school." In reality there is but one "school," that whose rules require that the public "be enlightened, so that injuries may not be sustained by the unwary, from the devices and pretensions of artful empirics and imposters."

The right to object to any evidence as not proper to go to the jury, or as not being of legal credence, ought to be earnestly insisted upon. Thus, in an action for malpractice, the testimony of a "natural bone-setter" should be objected to, for the reason that a witness who swears falsely to matters of professional belief and opinion cannot be punished for perjury. Evidence in such cases does not and cannot extend beyond opinion and belief, and the cross-examination of such a witness would only tend still farther to enlist the prejudices of the jury in behalf of the "*poor plaintiff*" and "*abused*" witness. How much sanctity is there in an oath to one who is a fraud upon society, and who knows himself to be a fraud, as is the case with "bone-setters," "cancer doctors," etc.?

CIRCUMSTANTIAL EVIDENCE.

Evidence as given by medical witnesses, acting as experts, is usually circumstantial or presumptive, that is, their evidence is deduced or inferred from one or more facts which are directly proved or admitted. It would seem indeed that nearly all evidence is of this character. A witness testifies to a certain act, he describes the manner in which the action was performed, he *presumes* it was done in earnest or in a jest, that is his *opinion*, and unless he is permitted to give this opinion as a part of his evidence, he fails to convey to the minds of the jury that which is sought for in his testimony. Upon a trial where intoxication is the subject in question, it has been held, "that the appearance which indicates intoxication cannot be so perfectly described in words as to enable persons not eye-witnesses to judge with accuracy on the subject."

In a case in which a mother was indicted for the murder of her child, in giving his charge to the jury, on the subject of evidence, GIBSON, C. J., said :

"No witness has been produced who saw the act committed, and hence it is urged for the prisoner, that the evidence is only circumstantial, and consequently entitled to a very inferior degree of credit, if any credit at all. But that consequence does not necessarily follow ; circumstantial evidence is, in the *abstract*, nearly, though perhaps not altogether, as strong as positive evidence ; in the *concrete* it may be infinitely stronger. A fact positively sworn to by a single eye-witness, of blemished character, is not so satisfactorily proved as is a fact which is the necessary consequence of a chain of other facts sworn to by many witnesses of undoubted credibility. Indeed, I scarcely know whether there is such a thing as evidence *purely positive*. You see a man discharge a gun at another ; you see the flash, you hear the report ; you see the person fall a lifeless corpse, and you *infer*, from all these circumstances, that there

was a ball discharged from the gun, which entered his body and caused his death, because such is the usual and natural cause of such an effect. But you did not see the ball leave the gun, pass through the air, and enter the body of the slain ; and even testimony to the fact of killing is, therefore, only inferential, or, in other words, circumstantial. It is possible no ball was in the gun ; and we *infer* that there was, only because we cannot account for the death on any other supposition. In case of death from the concussion of the brain, strong doubts have been raised by physicians, founded on appearances verified by the post mortem examination, whether an accommodating apoplexy had not stepped in at the nick of time, to prevent the prisoner from killing him, after the skull had been broken in pieces. I remember to have heard it doubted in this court, whether the death of a man, whose brain oozed through a hole in the skull, was caused by the wound, or a misapplication of the dressing. To some extent, however, the proof of the cause which produced the death rested on circumstantial evidence.

“The only difference between positive and circumstantial evidence is, that the former is more immediate, and has fewer links in the chain of connection between the premises and conclusion ; but there may be perjury in both.

“A man may as well swear falsely to an absolute knowledge of fact as to a number of facts, from which, if true, the fact on which the question of guilt or innocence depends must inevitably follow. No human testimony is superior to doubt ; the machinery of criminal justice, like every other production of man, is necessarily imperfect ; but you are not, therefore, to stop its wheels. Because men have been scalded to death or torn to pieces by the bursting of boilers, or mangled by wheels on a railroad, you are not to lay aside the steam-engine.

“Innocent men have doubtless been convicted and executed on circumstantial evidence ; but innocent men have sometimes been convicted and executed on what is

called positive proof. What then? Such convictions are accidents, which must be encountered; and the innocent victims of them perished for the common good, as much as soldiers who have perished in battle. All evidence is more or less circumstantial, the difference being only in degree; and it is sufficient for the purpose, when it excludes disbelief—that is, actual and technical belief; for, he who is to pass on the question is not at liberty to disbelieve as a juror, while he believes as a man.

“It is enough that his conscience is clear. Certain cases of circumstantial proofs to be found in the books, in which innocent persons were convicted, have been pressed on your attention. Those, however, are few in number, and they occurred in a period of some hundreds of years, in a country whose criminal code made a great variety of offenses capital. The wonder is they have not been more. They are constantly resorted to, in capital trials, to frighten juries into a belief that there should be no conviction on merely circumstantial evidence. But the law exacts conviction, whenever there is *legal* evidence to show the prisoner's guilt, beyond a doubt; circumstantial evidence is legal evidence.

“If the evidence in this case convinces you that the prisoner killed her child, although there has been no eye-witness of the fact, you are bound to find her guilty. For her sake, I regret the tendency of these remarks; but it has been our duty to make them, and it will be yours to attend to them.” (Elwell's *Malpractice*, 267.)

As an illustration of the value of this sort of evidence in detecting crime, and also to show some of the difficulties to be encountered by the medical expert, I subjoin the following history of the celebrated Parkman case:

Dr. Webster, the alleged murderer, had a residence in a Medical College in Boston. He requested Dr. Parkman to call on him at his rooms, on the 23rd of November, 1849, at which time and place they would discuss and settle a financial matter that existed between them. Dr.

Parkman was seen at about two o'clock to enter the Medical College, after that time he was never again seen alive. The prisoner stated that Dr. Parkman did not keep his appointment nor was he in the college that day. On the next Friday week, in the furnace, adjoining the prisoner's laboratory in the College building, there were found numerous bones mixed with the cinders and slag of the furnace, also blocks of mineral teeth. These blocks of teeth with the jaw, it seems, had been so placed in the furnace that the cold draft of air passing into the furnace, had prevented them from being as completely destroyed as were the other portions of the body. A quantity of gold which had been melted, was also found. In a vault there were found other bones, and in a tea chest there was found the entire trunk of a human body and other bones. These parts, when arranged in their proper positions, made a body of the size and apparent age of the missing man; besides, it presented the peculiarities belonging to Dr. Parkman. It being in a medical college it is likely that these parts would have been, in some parts, in duplicate, but such was not the case. However, with all this there would have been room to doubt, had it not been for the artificial teeth.

Here came in the expert evidence. Several dentists gave testimony to the teeth being those of Dr. Parkman. A mould had been made of the doctor's jaw, and this had been preserved. Its shape was such that the discovered block of teeth fitted perfectly. On the left side of the thorax a penetrating wound was discovered, and to this the death was attributed.

After a long and careful investigation the prisoner was found guilty. He subsequently made a confession, in which he stated that he first struck Dr. Parkman on the head with a heavy stick and then stabbed him with the knife found in the tea chest with the body.

In case of personal injuries medical evidence of the highest order should be procured. The following case illustrates the importance of the above rule. The case is

sent the editor of the *London Lancet*, by Mr. PERFECT, a surgeon of Hammersmitt.

"It is now thirty years ago, that accidentally passing through Packhouse, Turnham Green, my attention was attracted to a mob of persons of the lowest order assembled around the door of that inn, who were very loud in their execrations against a certain person who was suspected of having murdered his brother ; in corroboration of which I was told that his bones were found near the premises where he formerly resided, upon view of which a jury was then sitting, after an adjournment from the day preceding. I found that two surgeons had been subpoenaed to inspect the remains, and I had no doubt but that every information as to their character had been obtained ; curiosity alone, therefore, induced me to make way into the room, where I found that the coroner, and I believe, a *double jury*, were sitting for the second day, and were engaged in an investigation which tended to show that a farmer and market gardener at Suttoncourt Farm had, a few years before, a brother living with him, who was engaged on the farm, but whose conduct was dissolute and irregular to a degree that often provoked the anger of his elder brother, and sometimes begat strife and violence between them ; that the temper of the elder brother was as little under control as the conduct of the younger, and, in fine, that they lived very uncomfortably together.

"One winter night, when the ground was covered with snow, the younger brother absconded from the house (for they both lived together), by letting himself down from his chamber window ; and when he was missed the ensuing morning, his footsteps were clearly tracked in the snow to a considerable distance, nor were there any other footsteps *but his own*. Time passed on, and after a lapse of some few years no tidings were heard of his retreat, nor perhaps have there ever been since. Some alterations in the grounds surrounding the house having been undertaken by a subsequent tenant, (for the elder brother had then left the farm), a skeleton was dug up, and the cir-

cumstances appeared so conclusive that one brother had murdered the other, that the popular clamor was raised to the utmost, and a jury impaneled to investigate the case.

"After listening attentively to these details, I ventured to request of the coroner to be allowed to examine the bones, which I found were contained in a hamper basket at the further end of the room, and I felt much flattered by his immediate compliance, for he desired the parish beadle, who was in attendance, to place them upon the table; and having himself disposed them in their natural order, I found that they represented a person of short stature, and from the obliteration of the sutures of the skull, and the worn down state of the teeth, must have belonged to an aged person. But what was my surprise when I reconstructed the bones of the skeleton, and found the lower bones of the trunk to be those of a female. I immediately communicated the fact to the jury, and requested that the two medical men who had before given their opinions might be sent for, one of whom attended, and without a moment's hesitation corroborated my report.

"I need not add that the proceedings were instantly at an end, and an innocent man received the *amende honorable*, in the shape of an apology, from all present, in which the coroner heartily joined. It has since been proved, beyond all doubt, that the spot where the bones were found was formerly the site of a large gravel pit, in which hordes of gypsies not only assembled, but occasionally buried their dead, and perhaps more skeletons are yet to be found in that vicinity."

It will not be in courts of justice alone that the medical man will be called upon to solve questions his peculiar studies alone enable him to do. These questions, the proper solution of which, if it do not advance him in the estimation of the community in which he lives, will at least prevent censure from being inflicted upon an honorable profession. A case in point is the following,

which, as it illustrates the general feeling of anxiety that existed for several weeks after the disastrous Chicago fire of 1871, I will here give.

As soon as it was known to what gigantic proportions the fire had extended, the Rev. Mr. —, hastened to Chicago to look after some friends then residing in the city. With some difficulty the site of his friends' residence was found. All that remained were the crumbling walls of the basement, partly beneath and partly above the level of the street. Amid the *debris* of brick and mortar were the springs of a bed, a sword and scabbard, and some charred and broken bones. These being together, what more natural thought than that they were the remains of — perhaps his friend or friends. The fragments were carefully collected and brought to the interior of the State. The then medical attendant of the gentleman was called and his attention directed to the basket of remains, with a request to determine what bones they were. Approaching with due reverence, for he supposed, himself, they were human, he set himself to the task. There were nothing *but* fragments; however, he succeeded in arranging enough of them to give him something of an anatomical resemblance to the tuberosity of the ischium with its ramus, and the ramus of the pubes, but not those of a human being. His report was immediately given that the bones were probably the pelvic bones of some domestic animal. But how had they got there? The reports then current concerning the frantic actions of animals in the streets during the fire, warranted the assumption that while the building was burning, some animal had rushed in at an open door or window and had there perished. Comparing the reconstructed fragments with the pelvic bones of a cow satisfied the Reverend gentleman that if his friends had perished he had failed to find their remains. The gentlemen were forced to accept the situation and await the developments of time. A letter containing an account of the discovery of the bones, and the fears they had

awakened, was directed to such point as the family would be likely to have gone had they been spared. By return post a reply was received from the friend in question. It read: "*Dear Sir*: Myself and family are safe. The bones you speak of are probably the remains of a very fine pair of *antlers*, that I left in my library."

EXAMINATION OF EXPERTS.

Much of the ill-report into which expert evidence has fallen depends upon, first, the false method of selecting expert witnesses, and second, upon the manner in which such witnesses are examined by counsel. This is often of a character not calculated to confer much respect upon the legal profession. This arises from two principal causes; first, counsel are too apt to suppose that the witnesses selected by the opposite party, are selected purposely, to render a false opinion in the case; and, secondly, they engage in the examination of such witnesses, without any knowledge of medical terms, whereby they might construct an intelligent inquiry. To this may be added, the witness is frequently called upon, without any opportunity for preparation, to answer questions which require thought for their proper solution. Time for this is not given. It is true he has his remedy in replying "I do not know." Physicians have no court of ultimate appeal; if they had, much of the censure so lavishly spent upon them, now, would be deserved. Then, too, if counsel would give as earnest thought to the development of truth, as they do to the gaining of their cases, the cause of justice would be more substantially subserved. "The best evidence the case will admit," is quite differently construed by lawyers and physicians, and for this, the mode of selecting *experts* is largely responsible.

In respect to the clashing of opinions among medical witnesses, gentlemen of the law are the last persons who should make uncharitable remarks, as the citations

herein made abundantly show. That they give miserable testimony, in a miserable way, a recent ecclesiastical trial gives decided evidence. It should ever be kept in mind that opinions, formed from facts in evidence, are apt to be antagonistic. While the expert should be able to determine between the apparent and the real, his difficulties should not be enhanced by the unfair and ungenerous manner in which counsel frequently propound their questions. In fulfilling the functions of justice, courts should exert their power to compel counsel to put their questions clearly.

Opportunity is offered counsel to put his questions ambiguously, by requiring experts to answer upon hypothetical cases, or as to certain designated facts existing in the case, "supposing them to be true." Now the expert may not have been present when these facts were testified to, and if he was he would not be permitted to found his opinion upon them, for whether they be true or not, is for the jury to decide, and not the witness.

We find in practice so many points of dissimilarity in the same disease, modified, as each case is, by age, sex, temperament, concurring disease, social position of the patient, that there will necessarily arise, in the testimony of medical experts, seeming inconsistencies and contradictions that have no reality in fact. Under such circumstances the position and credibility of the witness stands in no enviable light.

Where a witness testifies to a fact which is wholly or partially the result of reason exercised upon particular circumstances, it is obvious that the reasons of the witness for drawing that conclusion are of the most essential importance for the purpose of substantiating that his conclusions are correct ones. These reasons the witness should be permitted to give.

The expert, finding his testimony called in question, may wish to fortify it by quotations from standard medical authorities. Whether he should be permitted

to do this, authorities differ. In *Collier v. Simpson*, 5 Carr. & Payne, 73, TINDAL, J., said: "I think I cannot receive medical books." It was further held, that although professional books or books on science are not admissible, witnesses might be asked the grounds of their judgment and opinion, which might in some degree be founded on those books as a part of their general knowledge.

ABBOTT, J., also, in *Rex v. Donellan*, objected to medical books in evidence: he said, "We cannot take the fact from any publication; we cannot take the fact as related by strangers."

"It appears to us that no witness can follow this advice without compromising the right and dignity of his profession, as well as the force of his evidence; for it would not be difficult to show that medical evidence altogether is little else than a reference to authority * * *. Is an oath more binding than the solemn act of sincerity between the author and the world by the very act of publication?" (*Edinburg Med. and Surg. Journal*, vol. 19, pp. 480, 610.)

In *State v. Rogers*, medical books were admitted, but in a subsequent case the same court refused to admit them. (*Elwell's Malpractice*, 331.) It was held, in the case of *Bowman v. Wood*, 1 Iowa, 441, that, as "medical witnesses were permitted to refer to and quote authors, there was no reason why they might not be permitted to read the views of distinguished authors. The opinion of an author as contained in his works is better evidence than the mere statement of those opinions by a witness, who testifies as to his recollection of these from former reading." So also in *Stoudenmeier v. Williamson*, 29 Ala., medical works, admitted or proved to be standard with the profession, are held admissible as evidence, with proper explanation of technicalities or phrases not generally understood.

The expert should not complain when the privilege of

fortifying his testimony is denied him, as it is a rule applicable to lawyers as well.

SPENCER, C. J., says of law books, that they "may be sometimes read to inform the mind of the court, but never as evidence."

"The medical witness, therefore, has no just grounds of complaint, because his books are not received in evidence. The court honors his individual opinion as of higher value than that of an outside author. The court presumes, that from reading these authors, close thought and actual observation and experience; the witness under oath, subject to a cross-examination, will more certainly enlighten the case than if it depends upon the published opinions of authors, who, perhaps, had a favorite theory to support or an old prejudice to influence them, on a question or subject constantly advancing. Then the author himself may have changed his opinions since the book was written." (Elwell's *Malpractice*, 335.)

The expert is to give an opinion founded upon the general principles of his science. It is right that his experience, his ability and his own sense of right should receive due acknowledgment at the hands of the court. But on the other hand all these circumstances are subject to great abuse. *Experience* and *gray hairs* are often appealed to; especially does the public adduce these as evidence of great ability. Of the two the gray hairs are often of the most value. In respect to experience, a writer has said, "I believe that no small portion of that odious discrepancy which has prevailed among medical witnesses, whereby the lustre of medicine itself has been tarnished, is chargeable to the prevalent affectation of being men of *experience* rather than men of *learning*."

It is usually such men whom we hear decrying medical authorities. It was in rebuking such a one, that the Hon. Chief Justice DALLAS said, "I will not sit here and hear science reviled by ignorant tongues."

The medical witness may be asked if such and such authorities are good. To this general question, his ac-

quaintance with medical writers should be such that he could give a general answer, but if he is asked if he agrees with such and such authority in matter of opinion, he should be quite certain what those opinions are before answering.

Bearing in mind that he is not to give an opinion as to the merits of the case, he is to answer all questions, that are permitted by the Judge, whether by counsel or jury, clearly and briefly, and if this is not sufficient to cover the entire truth, he is to add that which will.

Difficulties often arise between counsel and expert from the use of common words and terms which have a technical force. For instance, a phrase in very common use among physicians when speaking about what should be done in a given case, is, the "indications" are so and so. So also any symptom or occurrence, in the course of a disease, which serves to direct to a suitable course of treatment, is said to be "indications" for such treatment. Now this is a strictly medical use of the word, and is correct, yet counsel would generally object to it, and would ask what you meant by it, and when you replied that the symptoms, conjoined with your knowledge of the principles of medicine, directed to a proper treatment, counsel would be quite likely to curtly reply, "why don't you say so then." A recent writer in the *American Law Review*, in reviewing the Wharton trial, objects to the adjective "*fulminant*" in connection with cerebro-spinal meningitis, characterizing it as an "alarming adjective." For lawyers to do this is a "*tort*," for which an "*action*" ought to "*lie*."

The use of terms of various significations according to the import most naturally given them by the two professions, "necessarily creates ambiguity, a condition usually aimed at by the counsel, whose effort frequently is to make the worst appear the better reason." (Ordronaux.)

In the use of medical terms lawyers are quite as apt to commit a solecism, as physicians are in the use of legal

terms. Thus the reviewer in the Wharton trial speaks of "*urinic*" poison, when he intended *uræmic*; so also counsel have asked concerning "*dysuria*" in the *fæces*. Dr. Taylor remarks: "A judicious witness will avoid anything like a triumph over his examiner under such circumstances, and simply put him right."

If lawyers would seek the advice of an intelligent physician, before sending their briefs and abstracts to the printer, many of these mistakes would not appear in print.

"The expert," Dr. Percival remarks, "should use his best endeavors, that his mind be clear, and collected, unawed by fear and uninfluenced by favor or enmity.

"Manifestations of warmth and zeal beyond that which the occasion calls for, over-forwardness in testifying that which will benefit the party, and an ill-concealed reluctance in declaring that which tends to his prejudice, flippancy and levity of manner, coldness and apathy in describing injuries which would naturally excite a contrary feeling, indications of subtlety, artifice and cunning, are with a multitude of other tests for estimating the true character of a witness and the value of his testimony." (Starkie.)

Physicians when acting as experts should avoid, as far as possible, the use of Greek and Latin words, making use of these only when the vernacular does not express it as well. So, too, they should avoid the use of words from modern foreign languages, and words of a strictly technical meaning, so far as they can consistent with clearness. However, in cases where doubt might arise, in the use of the vernacular, the foreign word is to be retained, with proper explanation. The expert is to aim at a happy medium in this respect, making his testimony, either oral or written, comprehensible to the common mind, by explanation as the case may require. "Be the plainest man in the world," said Sir William Blizard, "in a court of justice; never harbor a thought that if you do not appear positive you must appear little and

mean ever after; many old practitioners have erred in this respect. Give your evidence in as concise, plain and yet clear a manner as possible; be intelligent, candid, open, and just, never aiming at appearing unnecessarily scientific; state all the sources by which you have gained your information. If you can, make your evidence a self-evident truth; thus, though the court may at the time have too good or too mean an opinion of your judgment, yet they must deem you an honest man. Never be dogmatic, or set yourself up for judge and jury; take no side whatever; be impartial, and you will be honest. In courts of judicature, you will frequently hear the counselors complain when a surgeon gives his opinion with any the least kind of doubt, that he does not speak clearly; but if he is loud and positive, if he is technical and dogmatic, then he is allowed to be clear and right. I am sorry to have it to observe that this is too frequently the case." (Beck's Med. Jurisp., vol. 2, 12th ed., p. 959.)

The expert is to remember that when he talks of "excited sensibility," "reflex action," "endemic disease," etc., both judge and jury are in the dark, these being terms with which both are entirely unfamiliar. It will reflect no credit, either, for the expert to speak of "the nerves being *relaxed*," the term being more applicable to the muscular than to the nervous system. He is to give his testimony as briefly and as much to the point as possible. He should give his evidence in such a manner as will convey the impression that he believes it himself. If there should be any doubt, it should be made known during the "direct examination." If he permits himself to become a partizan for either plaintiff or defendant he will most certainly receive a severe rebuke from the judge or from the counsel of one or the other party.

This impartiality is most difficult to exercise by a witness who has been in professional attendance on either of the parties, and who has been discharged by such party, because he did not look unfavorably enough upon the case to suit the intentions of the patient who pur-

posed bringing a suit for damages. Such cases frequently occur in connection with injuries received in quarrels.

“Parties who desire a medical examination for legal purposes, in this country, usually hunt up the doctor or demand that he visit them at the appointed time. In either case, when there is a desire to deceive the physician, there is a crutch, without which the patient cannot walk. Or if he comes to the physician’s office he brings his wife with him because he is so weak, also pills and other medicines he has been taking. Did we come suddenly upon such a person, we would find him at some gainful employment or enjoying some pleasure.” (Caspar, vol. 4, p. 81.)

It is usually in charitable practice that cases arise where it is claimed there is incapacity to make a living. These cases are surrounded with extreme difficulty. On the one hand, it is evidently the physician’s duty to guard the interest of the community that employs him; at the same time, there are undoubtedly cases of serious illness, which it is impossible for a physical examination to reveal. When the applicant is an able bodied person and has become an object of public care through his own dissipation, it would only be just to assume that he is a malingerer and treat him accordingly.

The medical practitioner is frequently applied to by parties seeking to evade public work such as road labor. Certificates of this character, it is unnecessary to say, should be free from technicalities so far as possible, compatible with fullness and completeness. It should contain complete *date* of its execution, place *where* examination is made, clear statement of the facts upon which the physician’s professional opinion is based,—and he should take care that this basis is carefully made out,—a statement of the reasons why such certificate is required, the object for which it is to be employed, the statement of the patient or his relations as to his condition, and the personal observation of the physician as to the actual morbid phenomena observed.

It might be advisable to refuse all certificates except under requisition from ruling Boards, and never to give one on the request of the party concerned or his relatives. The advantage of this method is, that when the medical examiner waits for an official requisition, he has the power to see the patient when he least expects such a visit, and should the certificate be adverse to the applicant, much unpleasantness will be avoided. The examiner should under no circumstances grant a certificate *instantly* at the request of the applicant.

Farther, here, as in cases before the court, the expert should form his opinions from his own observation, and not from that of his colleagues acting at the same time as experts. Another rule is, that the strictest courtesy is to be observed towards other experts associated in the case. "Respect yourself, and the public will also." It is the duty of the expert to pay great deference to the judge; as for opposing counsel, their self-imposed importance may be safely ignored. Their object ever is to have the witness testify in their favor, and they will use every means to accomplish this. "If, however, the dictation of the judge is such that it is antagonistic to the latest and most approved theories upon the case, the expert should respectfully so state it." Thus where a judge, altogether gratuitously, said to the medical witness, who was testifying to the value of the *docimasia pulmonum* ("Hydrostatic test, a method of proof to which the lungs of a new-born child are subjected, for the purpose of detecting whether it has or has not respired after birth; in other words, whether it was born alive or dead." Duglison's Med. Dict.), "You do not appear old enough to have seen the late Dr. Wm. Hunter, but you must know that he was one of the most eminent physicians of England, and that he has stated that no dependence whatever is to be placed on this test." The expert replied, "I am aware that was his opinion, but I entertain a different one, and I believe mine is now the received

theory among medical men." (Dr. Gilman, in Beck, p. 959, vol. 2.)

The courts are extremely jealous whenever a medical witness assumes any of the functions of the Bench, yet how frequently do judges arrogate to themselves, as just shown, the functions of the "expert." Especially will this be noticed in connection with cases of insanity.

Doubts occasionally arise, in cases of alleged murder, whether the death has been occasioned by the wound or by the unskillful and improper treatment of the wound. In the *Stokes* case it was proven that "the bullet, on entering the abdominal cavity, caused the *first* perforation of the peritoneum; then passing through the omentum, causing four more perforations of the peritoneum; thence through two knuckles (convolutions) of the ileum, four more perforations of the peritoneum and four of the small intestines; thence through the mesentery, two more peritoneal perforations; thence through the sigmoid flexure of the colon—whether it was the ascending or descending portion, I know not—with two more perforations of the peritoneum, a final perforation of the latter on its pelvic reflection over the psoas magnus muscle. There were, therefore, four (4) holes or perforations of the small intestines, two (2) of the large, and fourteen (14) perforations or distinct wounds of the peritoneum. The missile then passed below the muscular fasciculus of the psoas magnus, and following the course of that muscle over the arch of the pubes, without causing any injury whatever to the innominata or haunch-bone, lodged near the trochanter minor of the femur or thigh bone." (Peugnet, Gunshot Wounds of the Abdomen.) And yet it was thought that the medical treatment of Fisk had a great deal to do with his death, simply because it could not be proven that no man who had ever recovered from a gunshot wound of the abdomen did not receive as many wounds of the intestines and peritoneum as he did. To prevent certain dangers, that were certain to arise in a penetrating wound of the abdomen, Fisk's surgeons gave

him an opiate, as doubtless those who now call in question the treatment would have done, but Fisk died *post hoc, ergo propter hoc*.

This was one case in which, I believe, the medical witnesses were not called upon to deliver learned dissertations upon "wounds," it being admitted by the defense that Fisk had really received these.

In respect to definitions, medical witnesses had better not attempt them, without they give them in the words of the *statutes*. Especially this should be the case with such words as "insanity," "wounds," "poisons," "deadly," etc. The following definitions of a wound, under ordinary circumstances, would be considered *good* definitions: "A recent solution of continuity in the soft parts, suddenly occasioned by external causes." "A solution of continuity from violence of any naturally continuous parts." "An external breach of continuity directly occasioned by violence." "An injury to an organic texture by mechanical or other violence." (Taylor's Princip. and Pract. Med. Jurisp.) Dr. Guy accepts the element "*solution of continuity*," and then divides wounds into two classes: first, such as are *without solution of continuity*, and second, such as are *with a solution of continuity*. To the first class he relegates *contusions, concussions, simple fractures, dislocations, and sprains*. To the second he consigns *incisions, punctures and lacerations, compound fractures, and gun-shot wounds*." (Forensic Med.) "In Legal-Medicine, the term *wound* comprehends all lesions of the body." (Beck Med. Jurisp., vol. 2, art. "Wounds.")

"Where a prisoner had bit off the end of a finger, it was held, on a case reserved, that it was no wounding. So, when the nose has been bitten off, it has been held no wounding. Any kind of instrument is sufficient, but there must be some instrument used, to make it a legal wounding. A stone bottle, a hedge-stake, a gun, and even a shoe, if off or on the foot. A kick from a *bare* foot would not be a wounding. It has not been settled

whether the teeth of a dog, which had been set to bite a person, can be considered as instruments within these statutes." (Elwell's Malpract. and Med. Evidence, 315.) "A solution of continuity in the soft parts, produced by some mechanical agent." (Dunglison's Med. Dict., Philadelphia, 1866.) "To constitute a wound, the external surface of the body must be divided." (Am. Jurist, vol. 18.) "In France the legal and medical definitions accord. By a wound, is understood every local effect on the body produced by acts of violence, or by the application of any caustic or corrosive agent." (Beck, vol. 2, 279, 280.)

These numerous citations are made to show what difficulties medical witnesses will have to meet, and, knowing them, may to some extent be prepared to meet them. If the witness could not give a definition of a wound in the words of the statutes, he should incline to that adopted in France, then qualify it by "slight," "severe," "dangerous," etc., the meaning of which would be left to the professional knowledge of the witness. It would not be sufficient for him to make a naked declaration, that the wound was "dangerous." "He must, if called upon, state to the court satisfactory reasons for his opinion." In legal acceptance, those wounds in which the danger is not *imminent*, would not be dangerous. Wounds of the thoracic or abdominal organs, of the large blood-vessels, or a compound fracture of the head, with depression of the fragments of the skull, could well be considered dangerous, because life would be in imminent peril. Wounds that are only liable to be dangerous, remotely or only in certain cases, would not be considered dangerous. Such wounds might be considered "serious." Other wounds might be considered as "slight," or "very slight," etc. Very correct opinions may be formed from a large reading of "good surgical authorities in relation to injuries of different parts of the body."

CONFESSIONS.

Confessions of guilt may be sometimes made to a medical attendant. These must be free and voluntary on the part of the person making the confession. Under no circumstances is this to be obtained by threat, promise or inducement. The physician's duty is to make no comments, but reduce the person's words to writing, as soon as convenient or possible, read it to the person and obtain his signature, countersign it himself, and if possible have it attested by other witnesses.

It should be borne in mind that persons under the influence of disease have made voluntary confessions of guilt, which, when health has been restored, they make haste to deny. The mental condition, therefore, of persons making such confessions should be carefully ascertained.

DYING DECLARATIONS.

"Death-bed declarations also are receivable in evidence, when made after all hope of recovery has been given up. It is presumed that such persons are induced to speak the truth, by as powerful a consideration as an oath. It is not necessary that he should *express* his convictions. It may be inferred from the nature of the injury, or from other circumstances of the case." (Guy's Forensic Med.)

Persons arraigned by such declarations may vindicate themselves in the same manner as they might if the statements were made under oath.

The medical practitioner's duty in the case is to reduce the statements to writing, put no leading questions, nor any questions, except such as are calculated to explain ambiguous statements, read it to the dying person, and if possible obtain his signature. If there be no time for this, the physician is to make memoranda of the statements, in the *identical* words of the person, immediately. These notes he is permitted to use in court to refresh his memory, when he comes to testify. He cannot use a

copy of such notes. The physician must also satisfy himself as to the mental condition of such person, noticing particularly whether he be "calm and collected or otherwise, and whether he is under the influence of any strong bias or undue feeling of resentment."

The medical man is to note any signs the dying person may make, for these, if intelligible, are also received in evidence. (Elwell, 318.)

If time permits, the physician may relieve himself of much of this responsibility, by sending for a magistrate to take the dying person's deposition. This course should always be adopted when feasible.

Medical men should discourage the bringing of suspected persons before one who is dying, in order that he may be identified. Surgeons of considerable experience are aware that in persons dying from hemorrhage, or from wounds implicating the brain, delirium is quite apt to occur, and that this delirium is not easily recognized by non-professional witnesses. The ability to prove an *alibi* has upon more than one occasion saved the reputation and lives of persons wrongfully accused.

The duty of a medical witness, when called to view a dead body, will be considered when we take up the subject of Inquests.

(To be continued.)

ARTICLE II.

ETHER VERSUS CHLOROFORM.

A PAPER READ BEFORE THE COOK COUNTY MEDICAL SOCIETY,

By E. W. LEE, M.D., (DUBLIN), CHICAGO.

I purpose this evening to draw your attention to the relative merits of Chloroform and Ether as anæsthetics. Of course my personal experience of the subject must be limited, but I have endeavored to collect such information as I thought would be interesting to the Society, which has been done in a rather hasty manner.

I suppose it will appear almost superfluous for me to say that this country is the birth-place of anæsthesia in surgery—ether having been discovered to have the power of destroying pain, by the late Dr. W. G. T. Morton, a dentist, of Boston, Mass., in 1846. Chloroform followed shortly after, Great Britain being the seat of the discovery, and to the late Sir James Young Simpson belongs the honor of having introduced it for a like purpose. These discoveries may be regarded as the greatest boon that has been conferred on suffering humanity. Although British writers on the subject give us credit for using ether comparatively largely in this country as an anæsthetic, I think the real facts would fail to sustain the assumption, chloroform being more generally employed, as it is considered more agreeable to the taste, more rapid in its action, and takes a smaller quantity to produce the desired effect. The main question to be considered this evening is the comparative safety of the agents. In order to arrive at a correct conclusion, it will be desirable to note the effect of each on circulation and respiration.

Owing to the frequent deaths occurring from the use of chloroform, a committee was appointed by the Royal Medical and Chirurgical Society of London, in 1864, to inquire into its uses, and physiological, therapeutical and toxical effects. This committee, while investigating the subject of chloroform, indirectly considered the use of ether. In their report we find as follows :

EFFECT OF ETHER INHALATION.

The Heart.—The muscular movement is but little influenced ; the first, or stimulating effect, is less sudden and more sustained ; even after insensibility is procured its action is more vigorous. Ether may be considered as a stimulant, in a certain degree, to the heart's action. The mercury of the hæmadynamometer at first is absolutely raised, never falling until the respirations cease.

EFFECT OF CHLOROFORM INHALATION.

The Heart.—Is first stimulated, and its contractile force augmented, but after this its action is depressed, and although the respirations go on properly, its action, as shown by the mercury of the hæmadynamometer when connected with the circulation of the animal, fails, and the mercury falls.

Respiration.—In ether, with strong inhalation, there is a temporary arrest of respiration, but it is less marked than with chloroform. With small quantities there is no arrest of the breathing, although the number and depth of the respiratory efforts are diminished; after a short time the respirations become slow and full, and next, while their frequency rises, the range of their movements is reduced.

In chloroform, with strong inhalation, there is a temporary arrest of respiration, dependent on spasm. This arrest, after a few seconds, ceases, and inhalation can again take place. With smaller quantities the inspirations become gradually shallower, and for a time retain their natural order, but become less frequent, and after perfect insensibility is produced, the amount of air entering the chest is extremely small.

How Ether Causes Death.—The effects produced in a strong quantity equaled those of chloroform in a small, but with an important contrast, that it exerted but a very slight depressing influence on the heart. Death occurred by the failure of the respiratory movements, the heart's pulsations continuing generally for some time after the respiration had ceased.

With chloroform, strong inhalation caused the pulse and respiration to cease nearly simultaneously. In the majority of cases the pulse stopped before the respiration, and the heart's action could be distinguished for some time after the pulse had ceased.

The conclusion formed by the committee was that it is desirable to obtain an agent which shall produce the required insensibility, and yet be not so dangerous in its

operation as chloroform. Ether, to a certain extent, fulfils these conditions. It is less dangerous than chloroform, but its odor is disagreeable; it is slow in operation, and it gives rise to greater excitement than chloroform.

Other experiments have been made, showing that an atmosphere charged with more than a certain percentage of the vapor of chloroform, stops the heart before breathing ceases. The chloroform committee reported that the sequence of the phenomena during the experiments on animals is similar to that observed in man; and if the same percentage of the agent be administered, the results induced are nearly uniform. By combining the statistics collected by Dr. Andrews, of this city, and Dr. Richardson, of London, we find that in 92,815 ether inhalations, there were 4 deaths, or 1 to 23,204; in chloroform, 53 deaths to 152,260, or 1 to 2,873; a mixture of chloroform and ether, 2 deaths to 11,176, or 1 to 5,588.

In the report of the committee, June, 1864, a table of 123 deaths, occurring during or immediately after the administration of chloroform, is recorded, 109 deaths being thus given: Under 5 years, none; from 5 to 10 years, 9; from 15 to 30 years, 30; from 30 to 45 years, 32; from 45 to 60 years, 12; over 60 years, 2; 72 were males, 32 females.

The statistical tables of Drs. Andrews and Richardson demonstrate pretty clearly the relative safety of the agents. They show chloroform to be about eight times as dangerous as ether, and about twice as dangerous as chloroform and ether.

Many surgeons have abandoned the use of chloroform altogether as an anæsthetic. Prof. Gunn, of Rush Medical College, and Prof. Andrews, of Chicago Medical College, have, I believe, used ether exclusively for years, without accident, if I am correctly informed.

It has been proved that ether is superior to chloroform in sustaining the heart's action; therefore it has the less power for evil in case of careless or unskillful administration. The various stages of its operation are so

distinctly marked that if the most ordinary care be used in its employment, it is next to an impossibility for fatal results to ensue.

According to Dr. Ashurst and Dr. Morgan, in administering ether you can exclude air with perfect safety ; with chloroform the most extreme care must be used to admit air. Dr. Morgan, of Dublin, a surgeon and teacher of many years' experience, has devoted considerable attention to this subject. He has devised an ether inhaler which appears to answer the purpose so well as to effectually dispose of the objections attending ether as an anæsthetic agent. He has written a pamphlet containing much valuable information, and from it I have obtained much of the matter which I am able to lay before you this evening. Dr. M. says, regarding the admission or non-admission of air in employing ether, there has been much diversity of opinion, and some of the objections which have been urged against its use, of causing delay, sickness of stomach, headache or spasm, are dependent on this very diversity of application, as it is found by those surgeons who exclude air, that the results are satisfactory in the extreme. We have here the key of the question : ether vapor being considerably heavier than air, when applied by the sponge would flow away unseen from the mouth and nose, and much of it thus escape inhalation, while from being concentrated and more efficiently applied by the other mode (exclusion of air) it would act more satisfactorily, and produce anæsthesia.

I had a case the other day which tested this very point severely. A stout healthy man came into my office ; the last joint of one of the index fingers had been crushed whilst coupling cars ; on examination, I found it would be necessary to amputate above the seat of injury ; he had just eaten a hearty dinner ; he would not submit to the operation without an anæsthetic, so I put him under the influence of ether, fully expecting that in doing so he would deposit his dinner, if not my fee, before leaving.

Carefully excluding air, using this inhaler, he was insensible in three and one-half minutes. The operation was performed, when he quickly recovered consciousness; there was no sickness of stomach whatever. Dr. Morgan asserts that ether when applied in this manner produces insensibility as quickly as chloroform, and from what experience I have had with it I certainly agree with him. He considers it established, that while chloroform exerts a depressing influence on the heart, ether exerts a stimulating one; that chloroform is the most dangerous, while ether is the safest of all anæsthetics; that the only argument in favor of chloroform as contrasted with ether is, its convenience. Mr. Erichsen says in his work, "the fatal consequences which have attended the use of chloroform have caused American surgeons to almost entirely trust to ether in preference. Ether is certainly the safer agent." He also says, the only argument in favor of chloroform, is its convenience.

A French surgeon, Mons. Diday, of Lyons, has gone so far as to say, that any surgeon using chloroform instead of ether as an anæsthetic, would be culpable. A commission of inquiry formed by the Medical Society of that city, pronounced in favor of etherization, admitting that the comparative study of the two anæsthetics was far from being complete.

Notwithstanding the results of experiments and experience, many of the most eminent surgeons record their preference for chloroform as an anæsthetic agent. Mr. Lister, in a very able article in the last edition of Holmes' Surgery, takes strong ground in that direction, contending that the only cases where death results, unavoidably, from the use of chloroform is, when an idiosyncrasy exists antagonistic to its use, and that so seldom happens that it is not worthy of consideration at all. He states, in fact, that death only occurs from careless or unskillful administration, and he ruthlessly upsets many of our time-honored rules for conducting its use. Our preliminary examination of the heart, for instance, might better be

dispensed with altogether, for according to him, a patient with a diseased heart in the event of having to undergo an operation needs the chloroform more than if such a condition did not exist, the risk of the shock of the operation on the feeble heart being greater than that of the anæsthetic; better let the pulse alone and let the administrator concentrate his entire attention on observing the respiration, as that is the first to go wrong, the pulse failing secondarily—the heaving of the chest goes on when actually no air is entering. This would appear to coincide with results observed by the chloroform committee. He lays great stress on the beneficial effect of drawing out the tongue forcibly in case of accident, contending that in many cases it fails from not being properly done. Notwithstanding his able arguments in favor of chloroform, a careful perusal of his article and the cases which he cites, where death was imminent but for prompt and decided action, makes one more distrustful of its safety. Mr. Syme, he says, used chloroform in many thousand cases, also the late Sir J. Y. Simpson, without any unpleasant consequences. Simpson lost one case, near the end of his career.

Mr. Lister disposes of ether in a very summary manner, but he is obliged to admit nearly all the points claimed for it. While I do not agree with his conclusions, for argument's sake, admitting that they are correct, the very elaborate directions he finds it necessary to give for its administration, and the narrow escapes he has witnessed, must be regarded as a strong argument in favor of some agent possessing less dangerous qualities. I cannot refrain from relating a case bearing strongly on this point. Some ten years since, a young friend of mine was desirous of having an operation performed for strabismus, which was of an aggravated character, causing him much annoyance and discomfort. One of the first oculists of the day was engaged to operate, and he brought along an able assistant to take charge of the anæsthetic. Chloroform was chosen, but on attempting to

administer it, the heart's action became so tumultuous that after repeated efforts to get him under its influence they were obliged to desist, and the operation was indefinitely postponed. During the past summer I saw him for the first time since ; he was then suffering from double strabismus, the other eye having become affected, but not in so marked a degree. I urged him to try once more, and that ether should be employed instead of chloroform ; after some persuasion he yielded, but insisted that he could not be anæsthetized. Yet, notwithstanding these unfavorable circumstances he sank into insensibility in about four minutes, and the operation was successfully performed, resulting in perfect correction of the deformity. Here was a case in which there certainly existed an idiosyncrasy antagonistic to chloroform yet yielding readily to ether.

To the general practitioner this subject must be full of interest : he is depending in many instances on his local reputation for his success. The operating surgeon, having a firm standing in the estimation of the public, can stand a fatal case or two with far less injury to his reputation than his less prominent brother, therefore ought he not to select with great care the safest agent, not only for the sake of those whom he is called on to aid (which, of course, should be the first consideration,) but also for his own ?

It may not be out of place here to make some remarks concerning the use of anæsthetics in cases of severe shock. Either of the agents in question has the power of stimulating the circulation when properly used, and is relied on as a most potent aid in procuring that result. So the surgeon does not now wait, as of old, for reaction, but proceeds to use the anæsthetic, some contending that we cannot use it too soon. This I cannot agree with, as nature, in most cases, makes some effort at reaction, and when she does, is the proper time to employ it. You certainly run a risk of annihilating the action of the already feeble heart by too early administration, and the fact of its having been used under such circumstances with

impunity should not be considered any justification of the practice. There is hardly a practitioner who has had occasion to use chloroform frequently, that cannot call to mind some very narrow escapes. As has been shown, the space between complete insensibility from chloroform, and death, is short indeed. Sometimes we are called on under circumstances where we are obliged not only to operate, but look after the anæsthetic as well, skilled help not being available, so that the responsibility is double. I think few will deny that, under such circumstances ether is immeasurably the safer agent.

I am, as I said in the beginning of this paper, contrasting the relative merits of the two leading anæsthetics. I think that the statistics relative to the ages at which death occurred, to which I have referred, need some attention. They appear to show that the period under five years of age may be regarded as safe for chloroform administration. This may, perhaps, be explained by the fact that fewer subjects are submitted to its influence at that age. I have never heard of any accident attending its use during parturition, there seeming to be a peculiar condition favorable to its action.

If I would not be considered tedious, I should like to relate a case bearing on that point. I attended a healthy young woman in parturition, some years since; the complications arising during the labor, necessitated the use of chloroform at intervals, for about five hours. She bore it remarkably well. I had no professional assistance. That same woman came to my office, some time after, to have a needle extracted, that penetrated in the vicinity of the knee-joint. I had an assistant to administer chloroform to her. She was barely under its influence, when, without any warning, circulation and respiration suddenly ceased, and were with great difficulty again restored.

Considering the absence of any record of deaths during parturition, and under the period of five years of age, chloroform, in these cases, may be considered as

safe as any other anæsthetic; under all other circumstances, ether is superior.

Before closing, I will draw the attention of the Society to the fact that ether is, and has been for a long time, in certain districts in the north of Ireland, used as an intoxicant. Its exhilarating effects are such, Dr. Morgan says, that many have found it a seductive substitute for alcoholic stimulants, even to the extent of producing intoxication. In Ireland, curiously, its virtues, if they may be styled in this way, have been already appreciated, and as that province whose inhabitants are peculiarly accredited with astuteness has been the most noted for its consumption, we may conclude that it presents, despite its supposed disagreeable odor, the recommendation of being good value in producing the desired effects.

A Mr. Draper, in the *Medical Press and Circular*, has lately put the question of ether as an intoxicant in so clear a light, that it has attracted considerable attention. He states: "The floating idea that there are fair consumers of Hoffman's Anodyne and perles d'Ether, for whom ether had never been prescribed, quite prepares one for the discovery that there are, in the northern part of Ireland, a number of people who, forswearing alcohol, supply its place with ether—a race to whom ether is what koumiss is to a Kalmuck, ava to a South Sea Islander, absinthe to a certain class of Frenchmen, or gin and whisky to their more immediate neighbors. That they should take 'nips' of ether morning, noon and night, as they would whisky, and—for anything shown to the contrary—drink good luck or ratify bargains in a glass of ether, was not a thing to look for, and is perhaps without parallel in the history of narcotic stimulants. The facts rest upon the authority of a number of gentlemen in their respective capacities of physicians, clergymen, ether manufacturers and druggists.

The usual quantity of ether taken at one time is from two to four drams, and this dose is repeated twice, thrice, or even four and six times daily. It is taken unmixed

with water; indeed, its very slight solubility in that fluid would make this a useless precaution; but the usual practice is to first take a mouthful of water, then a dose of ether, and again a mouthful of water. -

The intoxication produced by ether resembles that of alcohol, but it is much more rapidly produced, and is more evanescent. The ether seems to be eliminated entirely by the lungs, and the breath of the ether drinker always affords ample evidence of his addiction to the habit. I am credibly informed that at the fair of Drapertown, which appears to be the paradise of ether drinkers, the prevalent smell is not, as at country fairs, of pigs, tobacco smoke, or of unwashed human beings, but of ether. I have not been able to learn that, apart from the moral ill effects common to all excitants and intoxicants, the habitual use of ether brings in its train any peculiar evils, and although it would be wrong to draw a conclusion from completely negative evidence, I am disposed to believe that the votaries of ether incur less danger from the habit than ordinary dram drinkers, and there are two good reasons for this belief.

If we assume that there is nothing specifically injurious in the action of ether, it will be readily admitted that, having a definite chemical composition, and not being very liable to adulteration with other fluids, it must be an improvement upon the sophisticated alcoholic potations which, with these people, it has replaced. Again, the affinity of ether for water is so slight that dehydration of the mucous tissue of the alimentary canal and that aseptic condition which so well mark the difference between the effect of ardent spirits and of alcohol in the form of unbranded wine, cannot be evils attending its use.

The quantity consumed.—Now if we assume the ordinary quantity taken at one time to average three drams, and this quantity to be in effect the equivalent of half a glass of whisky, we arrive at the result that three gallons of ether supply the place of ten gallons of whisky. It

is very difficult to arrive at any accurate idea of the extent to which ether is used in the north of Ireland. Omagh is said to take 250 gallons yearly, and one Dublin manufacturer has sent to Belfast at the rate of 4,000 gallons yearly."

Dr. Lee then exhibited the inhaler, and stated that he had used it in some twenty cases. The shortest time, in adults, for anæsthetization was two and one-half minutes; the longest, eight. In children the time was even shorter. It is so constructed that air can be entirely excluded; about one ounce of ether usually produces complete anæsthesia, and if the operation be prolonged, one-half ounce is poured into the apparatus as required. Squibb's ether was used.

Progress in Medical Sciences.

ARTICLE I.

PROGRESS OF SURGERY.

By JNO. E. OWENS, M.D.,

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1. A successful case of Traumatic Tetanus, treated by large doses of Calabar Bean. By SYDNEY RINGER, M.D. (*The Practitioner* 7, London, November, 1874.)
2. Quinine and Suppuration. By DOUGLAS MORTON, A.M., M.D., Louisville Hospital, Ky. (*The Practitioner*, London, Nov. 1874.)
3. Treatment of Intestinal Obstruction. By Dr. LIBUR. (*Revue Med.-Chir.*, Allemand, 1874; *The Practitioner*, London, Nov. 1874.)
4. Paralysis, caused by Pressure of the India-rubber Cord used in the Bloodless Operation. Reported by Dr. BLAUVELT, House Surgeon at Roosevelt Hospital, N. Y. (*The Med. Record*, Nov. 16, 1874.)
5. Tracheotomy with the Red-Hot Iron. (*Gaz. Med. de Paris*; *Wien Med. Woch.*, 26, 1874; *The Med. Record*, N. Y., Nov. 16, 1874.)
6. Cases from Prof. GUSTAV SIMON's Clinique at Heidelberg. (Reported for *The Med. Record*, N. Y., Nov. 16, 1874, by NATHAN BOZEMAN.)

1. Dr. O'Leary, Professor of Materia Medica and Therapeutics and of Forensic Medicine at the University of Cork, was attacked with traumatic tetanus, whilst on a visit to London. The case was under the care of Sydney Ringer, M.D., Sir James Paget, and Mr. Gould. When first seen by the former, patient had been ill in bed three days. There was an oval ulcer about two inches long and one and a half broad, the result of a wound received six weeks previously. The ulcer had been irritated a few days before his illness, by putting on riding breeches. During the examination of the leg, several of its muscles became for a few seconds rigidly contracted, and then they relaxed; then in a few seconds the muscles of the opposite thigh became affected, and even the muscles of both legs. Similar attacks occurred every few seconds, affecting sometimes only a few, at other times involving most of the muscles of the legs. The abdominal muscles were much more rarely, and far less severely, affected, and those of the neck occasionally felt stiff. The upper extremities, chest and jaws, were unaffected. The patient protruded his tongue and swallowed readily and without producing tetanic contraction. The spasms were not brought on by external impressions, such as irritating the leg, or by getting out of bed. His pulse was feeble, and beat 120 per minute. His breathing was calm. Thirty grains of chloral, in combination with laudanum, were ordered. The next morning, the fourth day of illness, he was much worse. The spasms, now frequently recurring, involved the arms. The tetanic seizures only remitted, for, on decline of each paroxysm, more or less rigidity still remained. The muscles of the chest and jaw remained unaffected. Extract of physostigma, gr. $\frac{1}{8}$, was now administered every quarter of an hour by the mouth. After five grains had been given, the paroxysms became much less severe, and the attacks intermittent instead of remittent. The expression was much less anxious, the skin moist and slightly perspiring, and the pulse beat 60. During the first twelve hours

(Sept. 13) after having taken 10 grains, the patient was surprisingly better. The medicine had produced slight loss of power, the arms and legs, especially the latter, feeling rather heavy.

Sept. 14. (Second day of treatment.) Last night he took 30 grs. of chloral and 10 drops of laudanum in addition to $1\frac{1}{2}$ gr. of ext. calabar bean, every hour, making 20 grains in nineteen hours; patient free from spasms for sixteen hours; no paralysis from the medicine; drug discontinued at 8 P. M.

Sept. 15. At 10 last night paroxysms suddenly returned with terrible severity; calabar bean, $\frac{1}{2}$ gr. every quarter of an hour, recommenced; at 10.30 A. M. patient took $\frac{2}{3}$ of a grain of extract, which was repeated at 10.40 and at 10.45, after which he took $\frac{2}{3}$ gr. every quarter of an hour. The attack continued with great violence, lasting, with slight remissions, from a quarter of an hour to twenty minutes. The patient was in imminent danger of asphyxia. The attacks occurred very frequently, for instance, at 11.00, 11.09, 11.25, 11.45, and 12.25. It being evident that the medicine had not yet produced sufficient effect, at 12.45 P. M. Dr. Ringer ordered every quarter of an hour $\overline{5}$ ss. of a mixture containing $\frac{1}{2}$ gr. to $\overline{3}$ i. At 2.45 P. M., symptoms of poisoning becoming manifest, a dose was omitted. Until this time the whole body had been persistently rigid; but now the body is completely relaxed, the jaws being tightly clenched. There is slight general paralysis; he can raise the limbs slowly, but soon they slowly fall again.

At 1 P. M., Sept. 16th, all trismus had disappeared. To this date the seizures had continued with varying frequency and degree, and the dose of the medicine was varied according to its effect, the *object being to keep up just sufficient paralysis to suppress the spasms.*

Sept. 20. The patient was well enough to visit University College Hospital to witness some experiments with the new Brazilian remedy, Jaborandi. He continued to take an occasional dose of his medicine. There is so

much that is interesting and valuable to the surgeon in this case that I would fain have reported it at still greater length. The interest is enhanced, on the one hand, by the fact that it was under the care of a most accomplished therapist; and, on the other, by the fact that the treatment was attended with success. The spasms first attacked the lower extremities, and gradually ascended the body. It ran an irregular course until the occurrence of the relapse which followed the discontinuance of the medicine, when all irregularity ceased. The attack yielded with unusual rapidity, for in thirty-nine hours after the relapse every vestige of the disease had disappeared. In spite of careful watching, serious general paralysis set in very suddenly, at one time, and that, too, when the patient was not taking the largest doses. In respect to the dose of the bean, Dr. Ringer remarks, this case is less valuable than it ought to have been, on account of a dispensing error. The first bottle contained 10 grains of the alcoholic extract. The *watery* extract, unfortunately, was subsequently used by mistake. In eighty-six hours Dr. O'Leary took 140 grains of the calabar bean; and of this, 88 grains were taken in thirty-two hours— $2\frac{2}{3}$ grains per hour. For a short time he took 4 grains an hour.

Dr. Eben Walton reports a case in which he gave of the alcoholic extract small doses on the first day, but rapidly increased the quantity, so that in a few days his patient took daily 16 grains, then 48 grains, then 57, and on one day 72 grains, without any serious amount of paralysis.

2. Dr. Morton records a series of experiments which he has made with the view of testing the theory that quinine exerts a peculiar influence over suppuration, in checking the amœboid motion of the white blood corpuscles and constricting the coats of the capillaries. Such uniformly good results, in his hands, have followed the treatment of gonorrhœa, by three or four injections daily of a solution of quinine ($2\frac{1}{2}$ grs. to $\frac{3}{4}$), that he has re-

jected all other modes. As a lotion (6 grs. to $\frac{3}{4}$), he claims to have gained very satisfactory results in the treatment of empyema; as an ointment, ten grains to the ounce of benzoated oxide of zinc, in ulcer of the leg; as a lotion, ten grains to the ounce, injected daily, in mammary abscess.

3. Dr. Libur, in a case of supposed invagination in the ileo-cæcal fossa, secured relief to the patient by injecting into the rectum a concentrated solution of bicarbonate of soda, and immediately afterwards a concentrated solution of tartaric acid.* A large quantity of gas was eliminated, which forcibly distended the intestinal tube. The gases and the fecal matters forthwith escaped freely, and the relief was complete.

4. A young man had had an operation performed upon one of his arms, in which Esmarch's apparatus had been applied. Paralysis of motion followed, and the visiting surgeons were of the opinion that it had been caused by the pressure made upon the nerves in the application of the rubber cord. Paralysis remained for about a month. Motion was being gradually restored.

5. Saint Germain, who advised opening the trachea with a button-shaped cautery iron, has tried the following modification of this operation on a three-year-old child, who was suffering from croup. Locating the cricothyroid membrane with his finger, he fixed the larynx firmly with one hand, while with the other he pressed a red-hot probe-pointed knife, directing the edge downward, into the larynx, just below the edge of the thyroid cartilage. There was no difficulty in doing this, and the loss of resistance showed that the knife had entered the cavity. The operator thus cut downwards through the cricoid cartilage and the first ring of the trachea. The operation was entirely bloodless. Using dilatation he

* The practice originated in this country.

readily introduced the canula. The case progressed favorably.

6. (a.) The third case reported (artificial anus in the right illiac region), is interesting as affording the opportunity to see outside of the abdomen, the ileo-cæcal valve and appendix vermiformis; also as illustrating the time it took, by hydrostatic pressure, for a stream of water to travel through the rectum and colon, which did not exceed one minute. From repeated experiments by Prof. Simon, it seems to make very little difference whether the patient was in the recumbent or erect position.

(b.) In the fifth case reported by Dr. Bozeman (retroflexion and prolapsus of the uterus), Prof. Simon illustrated in the most practical manner the subject of rectal and vesical explorations, by the passage of the hand in the rectum. This means of diagnosis, it is said, originated with the latter.

The passage of the *hand and arm*, per anum, to a point in the abdomen that the left kidney and false ribs can be felt, and the abdominal wall, of the same side, to the median line, be lifted up at every point, upon the ends of the fingers, is a means of diagnosis which should not be overlooked.

From what he has seen and heard of this procedure, at the clinique of Prof. Simon, the reporter is convinced that the dangers and accidents supposed to attend it have been greatly exaggerated. Now and then a little incontinence of fæces is observed, which, however, continues only two or three days.

The preparation for the operation consists in complete anæsthesia and in thoroughly washing out the large bowels, by hydrostatic pressure. From two to three quarts of water usually suffice. Prof. Simon has now operated eight times through the anus for recto-vaginal fistule. Why not, he suggests, approach the male bladder in the same manner in cases of chronic catarrh and

ulceration, and of great enlargement of the prostate gland, where micturition is attended with difficulty?

(c.) Another case served to illustrate the exploration of the female bladder, by the finger, through the urethra. Incontinence of urine had not followed the procedure. In the case under consideration, the bladder was filled with water, and the power of retention fully shown. The distention of the urethra is effected by means of a set of dilators, made of hard rubber, and ranging in size from that of the largest male catheter to that of the thumb. The dilatation is begun and carried on to the point of distention of the urethral orifice, when the latter is notched on the two sides and in front, the main seat of resistance. After this the requisite dilatation for the index finger to pass is easily reached.

Prof. Simon had turned the method to good account in a case of fungous growth from the vesical mucous membrane, which he diagnosed with the finger and detached with a gouge-shaped scraper. He had also satisfactorily employed the method in differentiating the size of a fistule, shut in by a colpocleidic operation, performed by another surgeon, the patient being dissatisfied with what she had been told was a cure. Upon examination he found the closure complete, and through the urethra only could he determine whether the fistule was small or large. Upon this point depended, he said, the justifiability or otherwise of re-establishing the vaginal tract. This method of vesical exploration with the finger showed the fistule to be small, and curable by refreshing and uniting its edges in the ordinary way. Thereupon the occluded vagina was opened and the fistule brought into view.

ARTICLE II.

PROGRESS OF OBSTETRICS.

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1. How do the Spermatozoa enter the Uterus? By JOSEPH R. BECK, M.D., Fort Wayne, Indiana. (*American Journal of Obstetrics and Diseases of Women and Children*. New York, November, 1874. Read before the American Medical Association, June 2, 1874.

1. In the above paper, which has the first place in the last number of the Journal of Obstetrics, the author has made a prolonged and wordy attempt to answer the question which apparently has concerned him not a little; and which, he informs us, has never before been answered. How far his effort has placed this question beyond doubt, the reflective reader will decide.

The first dozen pages are devoted to a tirade against all previous observers, for no other reason, it seems to us, than because they failed years ago to see what he has recently seen. We are surprised at this disposition, because it occurs to us as better taste to respect our teachers for what we have learned of them, and not to censure them for what they could not teach.

We are not conscious of a real need of apologizing for the omissions of those whose works have already made them known; but when he concludes that the doubts and opinions of Gardner place this observer "on the top of the fence," we ask permission of the author to remind him that it is always honest and often prudent to doubt, when we are not convinced; and if Gardner is really on the top of the fence in this matter, perhaps it is because that aspiring womb, in Fort Wayne, has not yet drawn him to either side.

Of Byford's work on the uterus, which he has vainly consulted on this point, he says "we might have expected some information, no matter how erroneous." We sincerely hope that this conclusion of the author is not the

expression of a principle which guides him in imparting knowledge to others ; but rather that he seeks to have his observations confirmed, at least before they are given to the world as unquestionable truths.

Thomas escapes comment by the author because, he says, "there is nothing to comment upon ;" though in the next edition of Thomas' work he hopes there will be more.

He is loud in praise of Sims ; who "*almost came upon the truth.*" It seems to us that the theories of Sims detract from the originality of the author.

On page 363, we are startled with the definition of spermatozoids ; (he prefers to call them spermatozoa,) "they are simply ciliated cells." If, indeed, the author has discovered that they are ciliated cells, it is not impossible that in this fact is the explanation of their peregrinations ; may they not then be capable of extensive wanderings, even from the testicle to the ovary ?

At last the author asserts that he will "answer the question in a positive manner, by a description of what he saw." Then follows an account of a married lady ; a blonde of strongly marked nervous temperament ; who came to be treated by him for a falling of the womb, which she had had since her abortion, six years before. Being cautioned by the lady to conduct his examination with great care, as her orgasm was easily aroused because of her passionate nature, he concludes that this is an opportunity for experimentation, such as had never before been offered to any one, and which should not now be lost. He now offends good taste by detailing how, when the mouth of the womb was brought clearly into view in the sunlight, he swept the right forefinger quickly three or four times across the space between the cervix and pubic arch, when almost instantly the orgasm occurred." Now mark what he saw ; the mouth of the womb open to the extent of fully an inch ; make five or six successive gasps, and instantly all was as before. What a spectacle ! Fortunately for the lady, and per-

haps for science, the gasping womb did not seize upon the observer at this moment.

We are clearly told that the aspiration, which the uterus exerts is the explanation of the passage of the spermatozoids "*to their destination.*"*

This aspirating force of the uterus can only be comprehended by recalling its alleged capacity of drawing the spermatozoids to their destination, which physiologists have agreed is some part of the Fallopian tube. Engineers may learn something from this; for here are overcome greater physical obstacles than are presented in the scheme of a pneumatic railway.

The temerity of husbands would be something remarkable, did they continue their marital relations after being informed of this snapping-turtle function of a woman's uterus during coition.

It is but fair to say, that the author liberally admits, in exceptional instances, some other way of the passage of the sperm; but his is the usual way.

With corresponding liberality, we are ready to admit that what he saw, may explain the entrance of sperm into *that* womb, but we do not admit that the opening of the mouth of the womb, and the suction force of the organ, *are common phenomena*, or that they are necessary to the entrance of the sperm into the uterine cavity. We conclude this for four reasons, viz. :

First. Because impregnation has been known, more than once, to follow the depositing of semen upon the external genitalia, far out of the reach of the womb.

Second. There are some women who slip a tightly fitting rubber cap over the cervix uteri during coition; by which the cavity of the uterus is effectually closed. Now, how could any such remarkable opening and enlargement of the neck take place, during the orgasm, without painfully constricting the neck in the unyielding ring of the so-called "preventive pessary"; or with-

* Reviewer's italics.

out breaking this latter? We have never known either accident to occur. On the other hand, *we have known those women to become pregnant, who had sealed their womb against the entrance of the sperm, but who had incautiously removed this seal too soon after sexual intercourse, though hours after the orgasm had subsided.* It is now a common conclusion, among those women, that there is no security against impregnation, by wearing the pessary alone, *if, beside, the semen is not washed out of the vagina soon after coition.*

Third. Such a function of the uterus is incompatible with the state of pregnancy; for, should this sudden and remarkable successive opening and closing of the organ occur, while it contained an ovum, the latter would be most surely detached and expelled; in other words, the woman would abort the first time her orgasm was aroused; such, however, is not the case.

Finally. We do not think the opening and gasping of the uterus are constant freaks of the organ, because Dr. Wernich, from whom the author quotes, did not observe them; and his opportunities for observation were even fairer than the author's, because the position of all the parts was normal.

The last third of this paper is allowed to an interesting and profitable article "On the erectile properties of the lower segment of the uterus and its significance," by Dr. Wernich; who hopes some day to prove that a certain mechanism of the cervix uteri, which the erection induces, is necessary to conception.

We also conclude this review, hoping soon to be possessed of more well founded facts, connected with this interesting physiological problem.

Reports of Societies.

CHICAGO MEDICAL SOCIETY.

THE OBSTETRIC FORCEPS.

(Read before the Society, at its meeting held December 8, 1874.)

By PHILIP ADOLPHUS, M.D.

This paper will treat of the obstetric forceps.

We will not attempt an exhaustive article, but speak of those points only on which authorities differ. We will examine the subject, pointing out errors having the endorsement of eminent men, and stating the latest practical reforms.

A critical analysis of different authors will discover many conflicting directions; author has copied author, until an assertion or theory, unsupported by fact, has, by constant repetition, assumed the force of law. Much has been presented in an abstruse form, calculated to intimidate the physician, and restrain him from rendering assistance at the proper period.

Demonstrations on the "Phantom" had evidently given birth to rules which cannot be adopted in deliveries, without injuring the woman. Thus, the single curved forceps was first employed; and authors taught that the blades should always be applied "to the os parietal, and extending on either side, in the direction of the occipitometal diameter of the head" (Bedford); whether the head presented antero-posteriorly, obliquely or transversely. When Levret and Smellie added the sacral curve to the instrument, most authorities, amongst whom we may note Simpson, Dewees, Meigs, Hodge, Bedford and Elliot, (although the double curve of the instrument was adapted solely to the sacral curve of the pelvis), still maintained that the blades of the forceps should be applied to the lateral portion of the child's head, regardless of its position in the pelvis.

Thus they teach even to-day, that the head in a trans-

verse position, in the superior strait, or cavity, or inferior strait, should be grasped by the forceps, with one blade applied in front of the sacrum, and the other in front of the symphysis pubis.

Moreover, eminent men, inexperienced in the use of the forceps, were afraid of its general introduction.

Thus, in Dr. Joseph Clarke's mastership of the Rotunda Hospital, Dublin, from 1787 to 1792, during which 10,287 deliveries took place, the forceps were used only 14 times; and in his private practice, extending over a period of forty years, during which he attended 2,878 labors, Dr. Clarke only once attempted to apply the forceps, and then did not succeed. (Collins' "Practical Midwifery," fol. 18.)

In the same hospital, under the mastership of Dr. Charles Johnson, from 1842 to 1845, in 6,702 deliveries, the forceps were only used in 18 cases.

I may give the statistics of the Royal Maternity Charity, as quoted by Dr. Ramsbotham, where, out of 48,996 deliveries, forceps, long and short, were used 73 times, or once in 671.2 cases. Consequently, the English became experts in embryotomy, and the lives of mothers and children were sacrificed, in just such cases, where the French, and especially the Germans, used the forceps. A glance at Churchill's statistics will illustrate this.

In forceps cases 1 child in 5 dies, and 1 mother in 34; craniotomy necessarily destroys all the children, whilst the maternal mortality is estimated as 1 in 5.

Of late the double curved forceps are used where the perforator was formerly employed; nevertheless, the statistics of English and Continental midwifery, on this subject, show a marked difference in favor of the Germans.

The frequency of forceps cases has been estimated by Churchill to be, amongst British practitioners, about 1 in 249; French, 1 in 140; and German, 1 in 106.

Churchill lays down the rule, that forceps are to be applied in no case, till we are perfectly satisfied that the obstacle cannot be overcome by the natural powers with

safety to the mother and child, and in this opinion he is upheld by most authorities.

Dr. C. C. P. Clark, in *Trans. N. Y. Med. Society*, 1870, comments on this as follows: "It is such a rule as this, causing perilous delay, that makes this instrument, in crude statistical tables, seem the means of death."

The time will arrive, and it is foreshadowed now in the practice of not a few practitioners, when the forceps will be used—in cases where delivery would have terminated by the natural powers—whenever the second stage of labor ceases to be actively progressive. By this procedure, much anxiety, pain and exhaustion is spared the mother. It is especially indicated in primipara, where, owing to delay, so many children are still-born.

Prof. Thos. Savage (in *British Med. Journal*, Aug. 14, 1869, page 183,) illustrates this point. The following table shows his practice:

In 1864, out of 73 labors, forceps were used 3 times, or 1 in $24\frac{1}{3}$ labors.

" 1865,	" 154	"	"	"	" 15	"	" 1 in $10\frac{1}{4}$	"
" 1866,	" 173	"	"	"	" 18	"	" 1 in $9\frac{1}{2}$	"
" 1867,	" 203	"	"	"	" 37	"	" 1 in $5\frac{1}{2}$	"
" 1868,	" 204	"	"	"	" 31	"	" 1 in $6\frac{1}{2}$	"

Total, 807 labors, in which forceps were used 104 times.

Of these 807 cases, five children were still-born, and one maternal death occurred from puerperal fever. He states that in none of his cases has he found any ill effects afterwards, such as laceration of the soft parts, or extensive rupture of the perineum.

The best forceps for the general practitioner are those that can be used whenever a suitable indication for the delivery of the child presents itself, whatever the presentation of the head, and its position in the pelvis.

We therefore would reject the single curved forceps, because the shape does not accommodate itself to the direction and form of the pelvic axes; for it can be used only when the head is low down in the excavation, or close to the perineum.

The double forceps should be chosen, for they can be applied to any portion of the pelvis, the leverage is

greater, and any operation pertaining to this instrument can be performed with it. The possession of one forceps only is necessary. The multiplicity of instruments is a sign of weakness. The use of one instrument, perfectly adapted to the work it has to perform, is always a desideratum. Simpson, Hodge, as well as Barnes, advise the rejection of the short forceps, for the more efficient and powerful long instrument.

Therefore, whenever in this paper the forceps are mentioned, we do not allude to the short instrument, but to the long double curved forceps.

It is our duty to use the forceps, "whenever in a head presentation, with probable room for the head to traverse the pelvis, and with the os fully dilated, or partly dilated, and easily dilatable, the longer continuance of unaided labor involves danger either to the mother or the child."*

The forceps should also receive a tentative but patient trial in cases which require the mutilation of the foetus; for the indications are often not to be distinguished, and can only be determined by trial.

Even symptoms *pointing towards* exhaustion, impaction and contusion, and *not merely the actual state* of exhaustion, collapse, contusion and inflammation, call for the application of the forceps.

Time as an element must not be considered: the state of the patient determines our action.

For a woman must be conducted through a labor, natural or instrumental, without a dangerous strain on her system. She must be relieved artificially, whenever, in spite of the administration of sedatives, the effects of irritation show themselves.

The administration of anæsthetics in forceps labors should be avoided, especially where long continued steady tractions are necessary to relieve the mother. It is a satisfaction in these cases, even to exceptionally skillful and experienced men, to be able to ascertain, by the expression of the patient's countenance, that no in-

* C. C. P. Clarke, op. cit.

jury is inflicted by the instrument. Besides, in just such cases, the non-administration of anæsthetics gives the child an additional chance of safety.

The forceps adapt themselves to the anatomical condition of the pelvis and soft parts, not to the position of the head. The blades of the forceps are fashioned to accord with the axes of the pelvis; their sacral curves must follow and coincide with the utero-vaginal curve; therefore, they must be introduced, placed into, and removed from within, the pelvis according to those laws. Any other course leads to the injury of the mother's parts.

In fact, authors who order the forceps to be placed along the child's head, place them, after locking, on the sides of the pelvis; for they insist (I quote Bedford's words, see fol. 56, Edit. 1871) that "*the head being in a diagonal position, after locking the instrument, and before making any extractive force, the first thing to be done is, gently to turn the forceps, for the purpose of producing the movement of rotation, which will necessarily change the head from the diagonal to the direct position.*" These directions are placed in italics, and he adds: "Many a child has been sacrificed, and the mother cruelly lacerated, from the neglect of this fundamental principle in delivery by forceps." Ramsbotham, however, states that when the impediment of the brim is overcome, the head turns of its own accord with face towards the hollow of the sacrum, *without the use of any directing power on our part.*

The same author says (Med. Times and Gazette, 1862): "In employing the short forceps, I lay it down as a rule, that the blades should be passed over the ears, the head is more under command when embraced laterally, and there is less danger of injuring the soft parts during extraction." He, however, adds: "*But I confess that I have for many years been accustomed, however low the head may be, to introduce the blades within each ilium,*

because they usually pass up more readily in that direction."

Dr. Barnes, commenting on this passage in his "Obstetrical Operations," says: I think I am not wrong in believing that many others do the same thing, some not knowing it, and even imagining that they are following the ancient rule. Therefore it is to the sides of the *pelvis*, and not to the sides of the *head*, that the blades of the forceps should be applied. If the child's head is placed diagonally, one blade, on being laid within each ilium, will fit the forehead, the other will apply itself to the occiput. The correctness of this assertion is proved by inspection of the head, after delivery, when the impress of the blades of the forceps over one of the oblique diameters of the foetal head will be seen, and almost never along the parietal bones.

We herein follow the authority of the German accoucheurs, quoted by Cazeaux (fol. 69, ed. 1868), who recommend the blades to be placed on the sides of the pelvis in all cases.

This proposition once established, what amount of ambiguity, complexity and false teaching vanish? What becomes of the variations of application of this instrument, in the different positions of the head, at the inlet, cavity and outlet, which are taught us by authors? These may be practiced on the Phantom, but would crush the soft parts of the parturient patient.

Therefore place the patient on the back, as directed in the books, take the blades of the forceps, join them, and holding the instrument with the concavity of the pelvic curve forward, and the blades in the position they ought to occupy in the pelvis.

Consider, that you are about to embrace between them the globular head of the foetus, which you know is within the pelvis; that you therefore must pass the separated blades within the pelvis, according to correct anatomical principles; placing one within the left and the other within the right ilium, the convex portion of the forceps

fitting the concave portion of the sacrum. Consider also that, having placed them opposite each other, you have to lock them; and after locking, the two blades with the head of the child must become a unity. Thus, the handles being grasped, the child is to be extracted by following the anatomical curve of the sacrum, vagina and perineum.

Then proceed to separate the warmed and oiled blades, and take the left or male blade near the centre, into your left hand, and introduce it into the vulva, slip it along the two fingers of the right hand, put between the cervix uteri and the child's head: it will guide itself and be placed alongside the left lateral portion of the pelvis, embracing the head. Leaving it in the hands of an assistant, take the right or female blade into your right hand, introduce it into the vulva, along the palps of the fingers of the left hand, which are placed between the os uteri and the child's head, and it will guide itself along and within the right lateral portion of the pelvis, and these embrace that part of the head which it will find there.

Do not look for any particular portion of the child's head; disregard its position, but be sure to regard the anatomy of the hard and soft parts of the pelvis.

Your blades, thus anatomically conducted, will enter easily, instinctively and unerringly, and will place themselves on each side of the globular head, which they will embrace.

Do not watch the handles of your forceps, as the books teach you, do not burden your memories with a thousand details, which you will forget at the bedside. Let your brain have a thorough conception of the anatomy of the pelvis, its containing head, the adapting curves of the forceps, and the act you are to perform: the hand will then execute the bidding of the will, when the blades of the forceps disappear from sight.

Your forceps will lock easily, provided you have met with no resistance during their introduction. If you meet

with it, you must overcome it by a gentle backward, upward and inward movement, which will result in placing the blades fairly upon the head, at the same time carrying them back into the axis of that part of the utero-vaginal canal in which the head is situated.

If you cannot lock the forceps, after fair and skillful trial, remove the blades, examine the pelvis, look for deformities, and determine between turning and craniotomy.

Then extract, steadily, an assistant pressing the retreating uterus downwards. Rest, during the absence of a pain; extract according to the anatomical direction of the sacrum, vagina and perineum, until the child is born.

Authors tell us, whilst the head is distending the perineum, during the use of the forceps, to sustain it, or have it sustained. The practitioner cannot extract in difficult cases, and support the perineum at the same time. Moreover, assistants, skilled or otherwise, obscure the parts, and prevent the practitioner from seeing and feeling the amount of distention. There is less chance of its rupture in forceps operations, for the perineum is distended gradually, intelligently and anatomically, by the will of the physician. Should, however, a predisposition to laceration exist, it cannot be avoided.

How much traction and pressure you can apply in the extraction of the head cannot be taught. In ordinary cases, as little as possible; in difficult cases, as much as experience and intuition will teach. It may be necessary, in extreme cases, (namely in occipito-posterior positions, which are further complicated by disproportion between the pelvis and the head) to brace the foot against the sides of the bed, to pull with your arms (and not with your back) until overcome by sheer exhaustion. Some authorities call this bad practice, but it is not so, for it has saved many a child from the crotchet.

To use the words of Elliot, "You may find that just such tractions are the only ones which can terminate a labor without recourse to embryotomy; and that just

such tractions, repeated again if necessary, may alone justify the subsequent resort to embryotomy."

Is the use of the forceps dangerous?

In cases where no deformity of the pelvis exists, when the head has rotated under the arch of the pubis, or when it is within the pelvis, the use of the forceps is without danger to mother and child. Gentle tractions, with an occasional oscillation, will suffice to deliver the head. These represent the majority of cases.

There is danger of bruising the soft parts of the mother, in the use of the forceps.

1st. We should be careful when applying the blades, to introduce them within the os uteri, and not between the vagina and the neck of the womb. We should feel for the edge of the os uteri, place the palps of our fingers on it, and, guarded by these, slip the blade of the forceps within the os uteri; else we perforate the cul-de-sac of vagina, and penetrate into the peritoneum.

2nd. If we follow the directions of reputed authors, and apply the long forceps to the sides of the head, when according to Byford, "it is situated diagonally with reference to pelvic curves, we incur much danger of touching the sides of the pelvis with the end of the blades, and bringing them in contact with the ramus of the ischium, at the outlet, and thus dangerously contusing the soft parts at these points." He adds, "I think, indeed, that there is very much more damage done to the soft parts of the mother, by making the diagonal application of the curved forceps, than there would be, if the rule was to use them with reference to the pelvic curves entirely." (Byford, fol. 317, ed. 1873.)

3rd. The direction of Tarnier and others, to correct a transverse or posterior occipital position, by rotating the forceps, after having applied it to the sides of the head, upon its own axis, in order to turn the head in the cavity of the pelvis from behind forward, bringing it first to the side of the pelvis and finally behind the pubis, *should be condemned*. If followed, extensive lacerations, con-

tusions, and their consequences must result. These cases should be left to nature, for according to Miller and Leishman, anterior rotation will in most instances be effected. Should this not occur, apply the forceps on the sides of the pelvis, and deliver with the occiput posteriorly.

4th. Should great obstacles to the delivery of the head exist, traction, as we have already stated, must be increased; the greater the traction, the greater the pressure. Increased pressure means danger to the child's life. Accordingly we have, as described by Schroeder, superficial dermatitis, suggillations and even circumscribed gangrene externally, and lacerations of the venous sinuses, and of other bloodvessels of the cranium within, which often produce the death of the child. Yet the use of force is justifiable, and is the only choice left the operator; craniotomy would otherwise have to be performed. Hodge's remarks on this point are so just that I will reproduce them here; and his views on this point are endorsed by Dewees, Barnes, Elliot, and Schroeder. He says: "our practice must be regulated not so much by the idea how much compression can be borne with impunity, but how much is absolutely demanded to accomplish delivery;" and Elliot states that great traction and compression offer the child a chance that the perforator can never offer, and therein lies its advantage.

In concluding, a few words may be said of the use of the forceps, when the head is above the superior strait.

The forceps ought not to be used when the head is floating and movable above the superior strait. We should wait until it becomes wedged into the pelvis. "In the contracted pelvis, the use of the forceps is contra-indicated until the head has passed through the contracted brim. (Schroeder, fol. 178, ed. 1874.)

Should the life of the mother and the child be endangered by convulsions, hemorrhage, prolapse of the cord, or excessive volume of the head, we must turn and deliver. Almost all authorities are agreed on this point,

yet every one gives the rules of procedure of a plan which they condemn.

Dr. Paoli: The paper is well prepared, but better adapted to be read before a class of students than before a society of physicians; reports of cases from every day experience would be of more profit to the Society.

Dr. Earle: Favors the use of forceps as often as necessary, but objects to their employment as a means of saving time. Hemorrhage is more likely to occur where forceps are used and delivery hastened, and it is desirable to make pressure on the abdomen following the contracting uterus as the child is being withdrawn.

Dr. Bridge: Had used pressure over uterus to facilitate labor without the success he was led to expect from the advocates of this method. He agreed with the author, and believed that the use of forceps was the subject of the day and hour in obstetrics.

Dr. Quine: Concurs with the author's views except in that he believes it practicable and advisable to apply the forceps in some cases before the head is engaged in the superior strait; he has used them twice in this way, and without encountering great difficulty. The instruments may be used oftener than there is need, but it is better to err in this direction than to be too hesitating in their employment. Forceps may be used to obviate laceration of the perineum. It is not so difficult as it seems to be imagined to adjust the forceps before the head is engaged in the superior strait, and in such cases where there is an urgent indication for speedy delivery, he considers it his duty to try the forceps before resorting to podalic version.

Dr. Adolphus: The uterus, if foiled, works itself into a fury and tends to produce laceration of the perineum, but we may by the forceps regulate the degree of tension of the soft parts. Forceps are not used as often as they should be in this country. Where the contractions, from their energy and frequency, render the occurrence of laceration probable, he is in the habit of prescribing mor-

phine, sometimes with and sometimes without ant. et pot. tart. When a young man fails in the application of the forceps it is the fault of his teacher, he prefers to make version rather than attempt to use forceps before the head is engaged in the superior strait.

Dr. Hutchinson: Used forceps without hesitation when it was necessary to do so; he applied them in a common sense way and *held on*, and he considers the directions for their application to particular parts of the child's head to be unworthy of serious consideration.

Dr. Pearson: Considers the use of forceps above the superior strait preferable to version. Toward the close of the meeting this gentleman tendered his resignation as a member of the Society, which was accepted.

CENTRAL ILLINOIS MEDICAL SOCIETY.

REPORT ON "MINOR OPERATIONS IN SURGERY."

(Read before the Society, at its meeting held at Gibson, Dec. 8, 1874.)

By J. L. WHITE, M.D., OF BLOOMINGTON.

Since the last meeting of this Society no great event has transpired to make an era in the history of surgical science, and I find it difficult to offer you a report confined to the surgery of the past six months. I have therefore chosen rather to call your attention to the little things connected with the practice of surgery, or such of them as occur to my mind, hoping some little item may prove of importance to you all, and that the paper may elicit from you items of interest and importance to me. In the affairs of life, little things, trifling in themselves, many times hardly deemed worthy of notice, make up the sum to individuals of human happiness or misery. It is notorious that, many times, little trials and annoyances of daily occurrence, to which all are subject, are borne with less fortitude than some great misfortune, coming perhaps but once in a lifetime. So, on the other hand, as our earth is made up of little atoms, little

items of knowledge—many of them so small as often to be deemed unworthy of attention—go to make up the expert in every department of the broad domain of science. In our medical colleges the great facts of surgery, both scientific and operative, are clearly set forth, and the principles upon which the science rests faithfully enunciated; but many of the minor details are left for each individual to discover for himself, as best he may, and there are but few surgeons who do not often gather little facts, not noticed by standard authors, a previous knowledge of which they realize would have been of advantage to them and their patients.

Among mechanics, one of the best evidences of the skilled workman is the manner and condition in which his tools are kept. "A place for everything and everything in its place," is a motto which should be ever present in the mind of a surgeon. To be able to lay your hands on any instrument wanted at any time, by night or day, or to tell any one just where in your office it may be found, is very desirable, and many times very important. To do this, your armentaria must be kept under lock and key. This is desirable for another reason. Instruments exposed to view and to reach are liable to be handled by curious, thoughtless observers, and are also more liable to become damp and to rust.

When an operation is to be performed, every instrument, ligature or appliance that may possibly be required should be spread out in such a way that they may be within easy reach and in perfect view of the operator; and this arrangement should be made out of sight of the patient. Nothing more completely distinguishes the refined, gentlemanly, cultured surgeon from the boor, than his constant, watchful regard for the feelings of his patient, whose mind is harassed with anxiety and doubt, even though the operation may be a very simple one.

The surgeon should be courageous, and unflinchingly do what is required of him, but the one who has no compassion and no word of kindness for the unfortunates

compelled to seek his aid, is unworthy of, and a disgrace to, the profession.

The principle upon which an instrument is made should be borne in mind, in order to its skillful use. Every cutting surgical instrument should be looked upon as a fine saw : some with the teeth set forward, towards the point, and these cut best from point to heel, as does a razor ; but the greater number are set in the opposite direction—for example, the common scalpel and bistoury—and act efficiently only when drawn from heel to point. This principle is to be borne in mind when sharpening an instrument, which most of us, living away from great centres, are obliged to do for ourselves.

The points of forceps and scissors should be kept oiled and in good easy working condition. All instruments, after use, should be made perfectly dry, and when liable to be seldom used, should be rubbed with a flannel dampened with kerosene before being put away. In operations where no anæsthetic is used, we should remember that less pain is produced when cutting from within outwards, than in a contrary direction ; hence a scalpel should be held at right angles to the part to be cut and made to penetrate directly to the desired depth, and so held while the incision is being carried to the required length that the deepest part of the incision is first made. In opening a boil or carbuncle, it hurts less to thrust a bistoury through the base and cut out than to cut down from the apex ; so in closing a wound with sutures, the thread should have a needle at either end and be introduced and drawn through from within outward. When anæsthetics are used and danger threatens therefrom, the prevailing opinion is, that it is due to a paralyzed condition of the brain, and the rational treatment is to supply the brain with blood as rapidly as possible, which is to be done by holding the patient up with head hanging down. If this fails to restore vitality in a moment or two, proceed immediately to artificial respiration.

In dressing scalp wounds take time enough to clean the

wound completely, being careful to see that no hairs are left between the lips of the wound. When possible, draw the edges together by braiding the hair or tying it together over the wound. Sutures are to be avoided if not imperatively demanded in scalp wounds, because sometimes the extra irritation they produce is sufficient to develop erysipelatous inflammation. In removing encysted tumors from beneath the scalp, it is not necessary to dissect them out. If a sufficiently long incision is made over the tumor and completely down to it, being careful not to cut the cyst wall, the tumor can be easily squeezed out with the thumbs.

In cases of fracture of the skull, and especially if the fracture is of the external table only, the most efficient instrument in raising the depressed portion, in my hands, has been a common sewing awl, such as may be found in the possession of any shoemaker.

I know of no better instrument for removing particles of steel or iron from the eye than a match, with the end sharpened a little. The foreign particle adheres to it better and less injury is inflicted upon surrounding parts than when the point of a lancet is used. When particles of dirt adhere to the upper lid, the drawing of the lid well down over the under lid and holding it for a moment or two enables the wipers of the lower lid to wipe away the offending particle.

In any operation within the nostrils, or in removing of foreign substances, great aid is afforded by hooks made by bending the ends of a couple of rubber hair pins and fastening the pins to a piece of elastic long enough with a little stretching to go around the head ; then hooking the bent ends of one pin in one nostril, carrying the rubber around the head and hooking ends of the other pin in opposite nostril, the calibre of each nostril is enlarged in every direction and so held without the aid of any assistant.

In removing such substances as a kernel of corn or cherry stone which children are very apt to thrust into

the nose or external meatus of the ear, and which are very apt to slip away from the grasp of forceps, the dipping the end of a pencil in solution of gum arabic or glue and holding it gently for a moment in contact with the substance, when sufficient adhesion will have taken place so that it can be withdrawn, or in the event of this experiment proving a failure, one or two horse hairs bent upon themselves in loops may be passed over the substance and by a little manipulation made to catch on the back side, when it may very readily be withdrawn.

The removal of a splinter from the finger or elsewhere, can frequently be accomplished by pressing firmly over it in the direction of its entrance with a small tube; the barrel of an ordinary watch key answers very well when the splinter is small. The pressure all around it forces the splinter up into the tube.

In dislocations of the phalanges if the phalange is bent back to an acute angle and pressure made with the thumbs on base of phalange, and at the same time with forefingers on end of bone from which it is dislocated, its reduction is generally easily effected, whereas by ordinary traction great force is required. Frequently, a dislocation of the shoulder into the axilla may be easily reduced, when other means have failed, by seating your patient on the floor with his back against a bed, then getting on the bed, taking hold of his hand and putting one foot on top of shoulder, pulling the hand and arm straight upwards.

In dislocation of the acromial end of the clavicle, which is often very difficult to keep in place by ordinary methods, I have succeeded by making a loop of adhesive plaster on the back, coming nearly up to top of shoulder, and a corresponding one on breast in front, then springing a piece of whalebone from one loop to the other over a compress on seat of dislocation and allowing it to remain until adhesions take place.

Inguinal hernia may sometimes be reduced when ordinary taxis fails, by pushing the thumb forcibly

through the inguinal canal by the side of the descended intestine. I have been informed Dr. Hill once read a paper before this Society on this subject.

Nothing in my hands gives so prompt and effectual relief in orchitis, as painting the whole scrotum with a *strong* solution of nitrate of silver.

In those hard hemorrhoidal tumors found on the very verge of the anus there is no danger to be apprehended from the use of the lancet. To slit them open freely and turn out the clot is safe and very efficacious treatment. In fissures within the rectum, thorough scarification through the mucous membrane at right angles to the fissure, is pretty sure to result in cure.

In operations on the rectum, in the female, the rectum may be inverted by introducing finger into the vagina and pressing downwards and backwards, forcing it out through anus. In one case of hemorrhoidal tumors where there was a constant disposition to protrusion, great relief was found from the use of the hard rubber "pile supporter," which in this case was worn without the slightest inconvenience.

In prolapsus ani, great relief is afforded by a strip of adhesive plaster between the nates over the anus and extending an inch or more, front and back.

In chilblains, much and often permanent relief is found from painting the foot with a strong solution of carbolic acid in glycerine.

In cases of needle, glass or other substances in sole of foot, the application of Esmarch's bandage so as to completely blanch the foot, enables one easily to cut down upon and find the offending substance.

In ingrowing toe-nail the introduction under corner of nail of a small piece of compressed sponge (sponge tent) about the size of a grain of wheat gradually and without much pain, lifts the nail out of its unpleasant position, and the occasional introduction of a fresh piece perfects the cure.

In glandular and other swellings, I have never been

able to find a better discutient than strong tincture of camphor. In my hands it has proved more effectual than iodine.

The combined wisdom of the ages has failed to discover any better dressing for ordinary wounds than pure water. When it is convenient to do it, the keeping of a wounded part in as hot water as can be borne, very much facilitates a cure and comes near to furnishing immunity from pain. It is necessary, however, that the water be kept all the time at a high temperature, which generally in ordinary practice it is almost impossible to do.

We are frequently consulted in cases of children unable to retain their urine at night. When remedies directed to a removal of the cause fail to produce the desired result in boys, a drop of collodion on end of prepuce furnishes protection to the bed until picked off.

Rubber bands for splints.

The tendency of the times is to a greater conservatism in surgery as in everything else. It is coming to be more generally recognized that it is more the province of the surgeon to cure than to cut. A part should never be sacrificed except when the demand for such sacrifice is imperative. To save a part which formerly would have been unhesitatingly removed, is a triumph of advancing surgical civilization, and one which, I am most happy to be able to say, is not unfrequently witnessed.

Clinics.

ILLINOIS CHARITABLE EYE AND EAR INFIRMARY.

Clinical Lectures on Diseases of the Eye,

By E. L. HOLMES, M.D.

SYMPATHETIC OPHTHALMITIS.

Gentlemen: You have the opportunity to-day of examining two cases, illustrating the history of a most important disease—a history comprising one of the saddest chapters in ophthalmic surgery: for the danger in many of these cases is extreme, although the symptoms are often so trifling and insidious as to excite no suspicion of an impending calamity in the minds of the patient or of the inexperienced practitioner.

The disease is usually termed sympathetic ophthalmitis. Its history in general is briefly this: a patient receives a wound in one eye in some one of the following ways; a fragment of metal or other substance has passed through the walls of the eye and become lodged in the intra-ocular tissues; a puncture has occurred near the union of the sclerotic and cornea; or there has been some serious injury of the globe, causing inflammation of the iris, ciliary bodies, and choroid. Less frequently, perhaps, the patient suffers with inflammation caused by a dislocated lens, or with chronic irido-choroiditis, with calcareous degeneration of the lens or choroid.

If the abnormal process in any of the above described diseases terminated in the eye originally injured and did not affect the sound one, there would be comparatively little harm, for a patient with only one perfect eye, though unfortunate, is many fold more fortunate than one who has lost both eyes.

Unhappily, as you observe in both these cases, the *unaffected eye* too often becomes the seat of a sympathetic inflammation of the choroid and iris, which can almost never be relieved, if it once commences, before vision is partially or totally destroyed.

Your future experience will undoubtedly teach you that the presence of a foreign body, as a fragment of percussion cap or steel, is the most frequent cause of danger. In regard to this class of injuries, a few points are worthy of notice. In ordinary cases, the removal of a foreign body from the vitreous humor is impossible, for hemorrhage, or, if the case has been neglected, the products of inflammation, conceal it from view. Even where the pupil is readily dilated and the object easily observed by the ophthalmoscope, the removal can rarely be accomplished, and in exceptional cases only by the most skillful use of instruments.

A foreign substance in the iris or lens may be removed with the surrounding portion of iris by iridectomy, or by the extraction of the lens as in the operation for cataract.

A minute fragment of heavy substance, thrown with sufficient force against the globe to make a puncture in its walls, has almost certainly passed into the intra-ocular tissues. Such a body often leaves an opening apparently more minute than the body itself.

You should remember, however, that a minute puncture may be made by a delicate point of a large body; but in such a case the piece is usually found after it rebounded from the eye.

The sensations of the patient are generally of no value in establishing a diagnosis whether there is or is not a foreign body in the globe.

From what has been said you are aware that an iridochoroiditis, however produced, is the disease predisposing to a sympathetic action in the other eye. The danger to the other eye is especially great when there is a persistent tenderness on gentle pressure over the region of the ciliary processes of the eye primarily affected.

The sympathetic inflammation is caused by an irritation of the ciliary nerves of the sound eye, induced by the diseased condition of the corresponding nerves in the injured one; and yet it is a fact, that, after the extirpation of an eye, amaurotic symptoms are occasionally

observed in the remaining eye, in consequence of irritation of the end of the optic nerve by an ill-fitting artificial eye or from a constriction of the nerve in cicatricial tissue.

The symptoms of sympathetic ophthalmitis are, photophobia, dimness of vision, lachrymation, and especially an immovable and irregular pupil, the iris becoming attached to the anterior surface of the lens. As there is often but little pain, and as the symptoms develop very gradually, danger is often unsuspected. The symptoms may appear in three or four weeks. I have known a patient who lost a remaining sound eye after suffering periodic attacks of pain and inflammation in an injured eye for fifteen years.

In regard to treatment, there is comparatively little to be said, but that little is of vast importance. In every case where a foreign body in the globe cannot be extracted, the eye should be extirpated without delay. The same operation should be performed in all cases of atrophied globe, where there is an obstinate, long continued inflammation with neuralgia, and tenderness on pressure, which the ordinary remedies for irido-choroiditis have failed to relieve. It is of great importance that the patient should carefully protect the eye from the influence of strong light, dust, use of the eye in reading or writing, for this exposure tends to hasten the sympathetic inflammation. Let us now turn to the history of the two cases before you.

Mr. —, æt. 27, a mechanic, tossed a hatchet upon the floor. A very minute fragment from the edge of the tool was broken off and flew into the left eye. A couple of days after the accident, I made an examination, and found a minute opening in the sclerotic near the corneal border, blood in the anterior chamber to such an extent that the portions behind the pupil could not be seen. I expressed the opinion that the piece of metal was still in the globe, and urged the immediate extirpation of the latter. The patient, however, preferred to return home, some distance from Chicago, and await developments, although I described the possible dangers of the delay.

In about seven weeks he returned almost blind in the other eye from a severe irido-choroiditis. The patient based his reason for this delay on the fact that his friends had mentioned a case, in which a piece of steel had remained eleven years in an eye without serious consequences to the other eye. The globe was extirpated nearly eight weeks after the accident, too late, however, to modify the inflammatory action in the other eye. The piece of steel was found in the ciliary muscle. In this case you observe a glaucomatous process in the remaining eye, the great tension (hardness) of the globe being readily felt by gentle palpation with the tips of the two fore fingers. The disease has not yielded to iridectomy nor the use of pot. iod. and mercurials. The prognosis is certainly most grave.

In the other case before you, we have the following history: The young man, 20 years of age, received a piece of steel in the right eye a year ago last December. It was removed from the eye by his family physician, at the end of about seven weeks, the walls of the globe being left. Unfortunately the other eye became inflamed and gradually almost blind. At present we find the injured eye atrophied, without inflammation. The other is also without inflammation, but is partially atrophied, the tension being much less than normal. There is a cataractous lens with iris very extensively attached, and still the patient can see to go alone in the street, although with difficulty. As there is scarcely a hope that iridectomy would improve vision, and as the sight is slightly improving under the use of iodide of potash and atropine, we will, for the present, follow no other treatment.*

I cannot close these remarks without urging you to make this chapter of ophthalmology a subject of special study.

* I would insist upon the operation of iridectomy, if the iris was even slightly raised above the surface of the lens. It is, however, atrophied, and undoubtedly attached to the lens throughout its whole posterior surface.

You will at times be called upon to exercise your utmost prudence. Just as the question whether you should amputate a limb or attempt to save it, may be a very difficult one to solve at the proper time, so will be the question whether you should extirpate an eye or attempt to save it.

RUSH MEDICAL COLLEGE.

Clinic by PROF. GUNN. *December 31, 1874.*

(Reported by HENRY L. HARRINGTON.)

CASE — Fracture of the Os Innominatum at the bottom of the Acetabulum.

Son of R. J. Fowler ; aged 11. The patient, a well developed, robust lad, comes from Storm Lake, Iowa, for advice, giving the following history :

Thirteen days ago he was thrown from a horse in a frozen ploughed field ; when picked up he was found lying with his right hip upon a large frozen clod.

A physician was called, who pronounced it a case of fracture of the ala of the right ilium and treated accordingly. Eight days afterwards, the father, suspecting that all was not right, called in consultation other physicians, who decided that the head of the femur was dislocated into the thyroid foramen : accordingly strenuous efforts were made at reduction, but without avail. The patient was able at all times to move the injured limb, and walked about the house the fifth day after the injury. He did not at any time suffer from fever, nor from any other symptoms of constitutional disturbance.

On examination, we notice when the patient is walking, a decided halt in his gait. When standing, we observe marked flattening of the right trochanteric region ; great apparent lengthening of the right leg ; slight eversion of the right foot ; and also that his body is strongly inclined towards the right side, and slightly bowed forwards. At this stage of the examination I suspect that we have downward and forward dislocation of the femur. Upon

placing the patient in the supine position and searching carefully in the groin for the head of the bone we fail to find it; we also find that the body and legs are straight, and that although the foot is everted, it can be rotated inwards voluntarily co-extensive with the sound side. Upon careful measurement we find that the elongation is *only* apparent, and due to the inclination of the pelvis. Again, upon putting the leg through its motions, we notice, that with the exception of extreme flexion and extension, they are as perfect and as devoid of pain as those of the left limb. We will now be obliged to give up entirely the idea of dislocation.

There is only one positive sign left upon which to base a diagnosis, *i. e.*, the flattening of the trochanteric region. This is so great, that a straight edge placed along the outer side of the injured side, rests upon the external malleolus, the great trochanter and the crest of the ilium, while upon the sound side it rests upon the malleolus and great trochanter only, being separated from the crest of the ilium at least one and one-fourth inches. Can it be an impacted fracture of the neck? I think not, from the fact that it would not account for the degree of flattening present; for the reason that in that injury we usually have some shortening, and also because the efforts at reduction would probably have separated the fragments. We must, therefore, look to the inner extremity for the injury. I do not think it can be impaction of the neck within the head, because that would not account for the flattening. I am now of the opinion that we have a fracture at the bottom of the acetabulum, with bulging inwards of the fragments, which allows the head of the femur to occupy a plane nearer the mesian line of the body. To confirm or to refute this diagnosis, the patient was placed under the influence of ether, and an examination made per rectum, which revealed a prominent tumor projecting into the pelvic cavity, corresponding in position to the right acetabulum.

It is a remarkable case, from the fact that we have had

no symptoms of inflammation of the pelvic organs or tissues. No treatment is required; the lad will undoubtedly regain very good use of the leg.

Editors' Book Table.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

THERAPEUTICS AND MATERIA MEDICA. A Systematic Treatise on the Action and Uses of Medical Agents, including their Description and History. By *Alfred Stille, M.D.*, Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania, etc., etc. Fourth edition, thoroughly revised and enlarged; in two volumes. Philadelphia: Henry C. Lea. 1874.

From the publication of the first edition "Stille's Therapeutics" has been one of the classics; its absence from our libraries would create a vacuum which could be filled by no other work in the language, and its presence supplies, in the two volumes of the present edition, a whole cyclopædia of therapeutics.

The present is simply an improvement upon the former edition, not in plan and scope of its matter, nor in the style of its presentation, for the breadth of the one and the elegance of the other scarcely admitted improvement, but in the additional matter, whose introduction has been necessitated by the advances in science, and also in the evidences of careful revision to which the whole has been subjected.

The new matter added constitutes about two hundred and fifty pages, of which the article upon Electricity covers a considerable portion. The author is a most uncompromising champion of the exclusive value of clinical experience as the basis for the determination of the thera-

peutic application of medicine, and considers the deduction of the "therapeutical uses of medicines from their physiological action" as a "mischievous error,"—which opinion we beg leave to deprecate as altogether too exclusive, as clinical medicine without physiological experiment would lack one of its most efficient guides, one of its sources of enlightenment, without whose aid it would grope doubtfully in the darkness of empiricism; and physiological experiment without the endorsement of clinical observation, would lack its only reliable certificate of therapeutic usefulness.

The language and style of the work evinces the professional erudition and scholastic accomplishment of the author, and, aside from its scientific and practical value, will serve as a model for professional authors who have yet to learn that the medical man is not the worse physician for being the accomplished scholar. H.

PAMPHLETS RECEIVED.

- A BRASS RING LODGED IN THE LARYNX FOR FOUR YEARS REMOVED BY SUB HYOIDEAN LARYNGOTOMY. Cure, by *Geo. M. Lefferts, M.D.*, Surgeon to the New York Eye and Ear Infirmary. 1875.
- TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY. Seventh Annual Meeting. Newport, R. I., July 15, 1874.
- HOW DO SPERMATOCYTES ENTER THE UTERUS? By *Joseph R. Beck, M.D.*, Fort Wayne, Indiana. Reprinted from the American Journal of Obstetrics for November, 1874. New York: Wm. Wood & Co. 1874.
- ON REFLEX IRRITATIONS THROUGHOUT THE GENITO-URINARY TRACT, Resulting from Contraction of the Urethra at or near the Meatus Urinarius, Congenital or Acquired. By *Fessenden N. Otis, M.D.* 1875.
- LETTER TO THE COMMITTEE OF CITIZENS of the proposed Schuylkill Drove Yard and Abattoir. By *Jno. H. Rauch, M.D.*, Treasurer of the American Health Association, late Sanitary Superintendent of Chicago, Ill. Philadelphia. 1874.
- CONTRIBUTIONS TO THE ANNALS OF MEDICAL PROGRESS AND MEDICAL EDUCATION IN THE UNITED STATES, before and during the War of Independence. By *Joseph Toner, M.D.*, Washington: Government Printing Office. 1874.

REPORT OF THE HEALTH OFFICER OF THE CITY AND COUNTY OF SAN FRANCISCO, for the Fiscal Year ending June 30, 1874. By *Henry Gibbons, Jr.*, Health Officer. San Francisco. 1874.

DYSMENORRHEA—A paper read before the Sacramento Society for Medical Improvement, June 16, 1874, by *J. E. Oatman, M.D.*

MEDICO-LEGAL SOCIETY OF THE CITY OF NEW YORK. Third Inaugural Address of *Clark Bell, Esq.*, Nov. 27, 1874.

SEVENTH ANNUAL REPORT, with the Constitution and List of Subscribers of the Toronto Eye and Ear Infirmary. 1874.

FREE PHOSPHORUS IN MEDICINE, WITH SPECIAL REFERENCE TO ITS USE IN NEURALGIA; A Contribution to Materia Medica and Therapeutics. By *J. Ashburton Thompson*, Surgeon at King's Cross to the Great Northern Railway Company, Surgeon Accoucheur to the Royal Maternity Charity. London: H. K. Lewis, 136 Gower street, W. C. 1874.

THE DISEASES OF THE STOMACH; being the third edition of the "Diagnosis and Treatment of the Varieties of Dyspepsia." Revised and Enlarged. By *Wilson Fox, F.R.C.P., F.R.S.*, Physician Extraordinary to her Majesty the Queen, etc. Philadelphia: Henry C. Lea. 1875.

JOURNALS RECEIVED.

The Atlanta Medical and Surgical Journal—December 1874, January, 1875.

The American Medical Weekly, Louisville—December 26, Jan. 2, 9, 16.

The American Journal of Insanity—January, 1875.

The American Practitioner, Louisville—January, 1875.

The American Journal of Medical Sciences—January, 1875.

L'Anatomic et de la Physiologie Journal de l'homme et des Animaux—Charles Robin. Paris. 1875.

The Boston Medical and Surgical Journal—Jan. 1, 7, 14, 21.

The Boston Journal of Chemistry—January, 1875.

The Clinic, Dec. 26, Jan. 2, 16, 23.

The Cincinnati Lancet and Observer—January, 1875.

The Canada Medical and Surgical Journal—January, 1875.

The Druggists' Circular—January, 1875.

The Detroit Review of Medicine and Surgery—January, 1875.

The Dental Cosmos—January, 1875.

The Indiana Journal of Medicine—Dec., 1874, Jan., 1875.

The Kansas City Medical Journal—December, 1874.

The London Lancet—December, 1874, Jan., 1875.

The Laboratory, Boston—December, 1874.

- The Medical Times, Philadelphia—Dec. 26, Jan. 2, 9, 16, 23.
 The Medical and Surgical Reporter, Philadelphia—Dec. 26, Jan. 2, 9, 16, 23.
 The Medical Record, New York—January 2, 9, 16, 23.
 The Medical Examiner, Chicago—January 1, 15.
 The Medical Press and Circular—London, Dec. 23, 1874.
 The Missouri Clinical Record—St. Louis, January, 1875.
 The Medical Herald, Kansas City, January 1, 1875.
 The Medical News and Library, Philadelphia—January, 1875.
 The Monthly Abstract of Medical Science—January, 1875.
 The Nashville Journal of Medicine and Surgery—January, 1875.
 The New York Medical Journal—January, 1875.
 The Ohio Medical and Surgical Reporter—January, 1875.
 The Psychological and Medico-Legal Journal—December, 1874, January, 1875.
 The Practitioner—Dec., 1874, Jan., 1875.
 The Pharmacist, Chicago—January, 1875.
 The Pharmacal Gazette, Nashville, Tenn.—Jan. 6 and 13.
 The Pacific Medical and Surgical Journal—January.
 Le Progres Medical, Paris—Nos. 46, 47, 48, 49, 50, 51, 52.
 The Peninsular Journal, Detroit—January, 1875.
 The Practitioner.
 The Richmond and Louisville Medical and Surgical Journal—December.
 El Repertorio Jalisciense, Guadalajara—Nos. 3, 4, 5.
 The Sanitary Journal, Toronto—January, 1875.
 The Southern Medical Record, Atlanta—December, 1874.
 The St. Louis Medical and Surgical Journal—January, 1875.
 The Virginia Medical Monthly—January, 1875.

Meeting of the Alumni of the Albany Medical College.

The Second Annual Meeting of the "Association of the Alumni of the Albany Medical College" was held in the City of Albany on Tuesday, Dec. 22nd. The following officers were elected for the ensuing year :

President—Dr. Jno. H. Beech ('41), Michigan. *Vice-Presidents*—Drs. Alson D. Hull ('41), New York; B. A. Mynderse ('53), New York; Alex. Shiland ('53), New York; Sol. Van Etten ('53), New York, and Charles L. Spencer ('57), Massachusetts. *Secretary*—Dr. Willis G. Tucker ('70), New York. *Treasurer*—Dr. G. L. Ullman ('71), New York. *Executive Committee*—Drs. H. D. Didama, ('46); William S. Going, ('41); James H. Scoon, ('49); James G. Bailey, ('53); M. H. Burton, ('53); Jno. H. Hill, ('53); Chas. H. Burbeck, ('59); A. P. Ten Eyck, ('66); J. H. Blatner, ('72); Oscar Myers, ('73).

The address of the retiring President, Prof. Didama, of the Syracuse University, was listened to with much interest. In the evening, the Association partook of its annual supper at the Delavan House, about one hundred and forty graduates being present.

Chicago Mortality Report for December, 1874. Reported by
Dr. BEN. C. MILLER, Sanitary Superintendent.

Accident, crushed	1	Heart, disease of	5
“ by chloroform	1	“ organic disease of	1
“ by explosion	1	“ hypertrophy of	2
“ by burns	1	“ mitral valves, disease of	1
“ by fall	5	“ malformation of	1
“ fracture of skull	1	“ valvular disease of	5
“ by suffocation	1	Hemiplegia	1
“ by scalding	4	Hemorrhage, cerebral	1
“ by railroad	2	Hernia, inguinal	1
“ by street cars	1	“ incarcerated	1
Anæmia	1	Hydrophobia	1
Apoplexy	7	Hydrocephalus	5
Asphyxia	1	Inanition	1
Asthma	4	Inflammation following surg. op'r'n.	1
Ascitis	2	Intemperance	2
Bowels, congestion of	1	Intussusception	2
“ hemorrhage of	1	Jaundice	1
Brain, congestion of	7	Kidneys, Bright's disease of	5
“ disease of	1	“ inflammation of	1
“ inflammation of	7	Liver, disease of	3
Bronchitis	12	“ cirrhosis of	2
Bronchitis, capillary	2	“ tumor of	1
Cancer	2	“ stricture of	1
“ of bowels	1	Lungs, abscess of	1
“ of jaw bone	1	“ congestion of	5
“ of stomach	2	“ paralysis of	1
“ of uterus	1	Malformation	2
Cholera infantum	1	Meningitis	3
Consumption	54	“ cerebro-spinal	5
Convulsions	55	“ tubercular	2
“ uræmic	1	(Edema, pulmonum	1
Croup	12	Old age	1
“ membranous	5	Paralysis	4
Debility, general	4	Peritonitis	8
Delirium tremens	4	“ puerperal	1
Diarrhœa	3	Pneumonia	3
“ chronic	1	“ typhoid	2
Diphtheria	7	Pleurisy	1
Dropsy, general	8	Pyæmia	2
“ pericardium	1	Sarcoma of thigh	1
Dysentery	2	Scurvy	1
Embolism	1	Septicæmia	1
Endo carditis	1	Spleen, liver & lungs, congest'n of	1
Enteritis	15	Stone in bladder	1
Entero-colitis	1	Strangulation	1
Encephaloid disease of lungs	1	Stomatitis	1
Erysipelas	4	Syphilis	1
Exhaustion	1	Tabes mesenterica	7
Fever, puerperal	7	Uterus, hemorrhage of	2
“ scarlet	7	Whooping cough	1
“ malignant	3	Suicide, by poison	2
“ typhoid	21	“ by cutting throat	1
Gangrene	1	“ by morphine	1
Gastro enteritis	1		
Heart, aneurism of	1	Total	451

Premature births, 6; Still births, 56. Total, 62.

COMPARISON.

Deaths in December, 1874, 451; in November, 1874, 440. Increase, 11.
Deaths in December, 1873, 566. Decrease, 115.

MORTALITY STATISTICS.

159

AGES.

Under one year.....	129	Thirty years to forty.....	49
One year to two.....	26	Forty " " fifty.....	39
Two years to three.....	19	Fifty " " sixty.....	35
Three " " four.....	12	Sixty " " seventy.....	20
Four " " five.....	6	Seventy " " eighty.....	16
Five " " ten.....	14	Eighty " " ninety.....	5
Ten " " twenty.....	16	Ninety " " one hundred.....	2
Twenty " " thirty.....	63	Total.....	451
Males.....	238	Colored.....	11
Females.....	213	White.....	440
Total.....	451	Total.....	451

Married, 175; Single, 276. Total, 451.

NATIVITIES.

Austria.....	2	Denmark.....	4	Norway.....	5
Bohemia.....	1	England.....	10	Scotland.....	4
Canada.....	4	Germany.....	74	Sweden.....	7
Native—Chicago.....	57	Holland.....	4	Switzerland.....	1
Foreign, ".....	126	Ireland.....	55	Wales & Unknown.....	7
U. States, other parts.....	88	Italy.....	1	Total.....	451

Deaths daily, 14½. Mean thermometer, 33.4°. Rain fall, .63 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	0	5,725	one death in
2	9	4,830	" " 537
3	14	14,861	" " 1,061
4	11	15,361	" " 1,397
5	18	20,078	" " 1,114
6	29	35,916	" " 1,238
7	29	31,722	" " 1,094
8	27	29,143	" " 1,075
9	33	31,654	" " 959
10	17	17,385	" " 1,023
11	15	14,022	" " 935
12	16	16,792	" " 1,050
13	14	17,892	" " 1,278
14	18	16,720	" " 929
15	57	45,545	" " 719
16	25	21,922	" " 877
17	23	20,777	" " 940
18	21	21,392	" " 1,319
19	1	4,677	" " 4,677
20	10	8,995	" " 900

387 Ratio of deaths to population in 1874, one death in 870½.

No. deaths in Wards.....	387	Mercy Hospital.....	5
Accidents.....	18	Police Station.....	1
Bridewell.....	1	St. Joseph's Hospital.....	3
Alexian Bros. Hospital.....	6	St. Luke's Hospital.....	3
County Hospital.....	4	On cars.....	1
Foundlings' Home.....	15	Snicides.....	4
Hahnemann Hospital.....	1	Total.....	451
Home for Friendless.....	1		
Hospital for Women and Child'n.....	1		

MORTALITY REPORT, CITY OF CHICAGO, FOR THE YEAR 1874.

Wards, 1874.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Population, 1874.	One Death in	Deaths in 1,000
1	1	4	4	4	1	1	1	4	4	6	5	9	34	5,725	108 1-3	5.94
2	4	3	26	3	2	8	9	8	4	1	1	14	48	4,880	100 3-5	9.93
3	15	13	4	33	15	16	27	34	27	13	15	15	253	14,361	58 2-5	17.02
4	12	10	10	10	7	8	16	20	23	10	14	11	151	15,361	101 4-5	9.83
5	10	11	21	17	19	13	32	40	16	26	18	18	250	20,078	80 1-3	12.45
6	51	57	39	53	38	41	132	126	91	47	47	29	751	35,916	47 5-6	20.91
7	41	40	39	43	32	61	185	149	70	59	35	29	783	31,792	40 1-2	24.68
8	30	30	35	21	32	47	138	119	72	48	28	27	627	29,143	46 1-2	21.51
9	38	26	40	24	36	42	110	75	45	29	34	33	532	31,654	59 1-2	16.80
10	16	14	21	13	13	9	27	26	11	12	11	17	190	17,335	91 3-5	10.93
11	18	18	19	11	11	11	29	32	18	11	9	15	202	14,032	69 4-7	14.40
12	16	11	11	15	17	12	45	40	21	24	11	16	239	16,792	70 1-4	14.10
13	19	20	18	13	9	8	39	28	28	13	14	14	223	17,892	80 1-4	12.52
14	16	11	14	13	19	11	41	41	18	24	13	18	238	16,720	70 1-4	14.20
15	87	52	62	35	64	75	234	169	129	65	59	57	1,088	45,545	41 9-10	23.91
16	34	32	24	34	43	37	94	68	59	40	23	25	513	21,922	42 8-4	23.31
17	35	21	23	22	28	26	68	72	42	36	17	23	418	20,778	49 2-3	20.12
18	29	23	24	30	33	16	82	65	41	20	21	21	405	21,392	52 3-4	18.93
19	2	6	3	3	4	1	15	7	7	4	4	1	57	4,677	82	12.20
20	11	7	11	7	11	3	22	15	6	10	7	10	120	8,995	75	18.33
.....	494	414	453	404	434	440	1,313	1,138	732	498	385	387	7,122	395,400		
Deaths by accidents, exclusive of Ward mortality.																
Reports received after the monthly mortality report was made out													874			
Total													29			
Total													8,025			

Average death percentage by Wards, one death in 55 2-5. Death rate exclusive of Wards, by accidents, etc., one death in 453 2-5. Ratio of deaths, all told, one in 60 1-13, or 20.39 in 1,000.

THE
Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.: AND WALTER HAY, M.D.

VOL. XXXII. — MARCH, 1875. — No. 3.

Original Communications.

ARTICLE I.

THE MEDICAL EXPERT AND MEDICAL EVIDENCE.

BY M. A. MCCLELLAND, M.D., KNOXVILLE, ILL.

(Continued from page 108.)

“PRIVILEGED” WITNESSES.

“Whatever, in connection with my professional practice, or not in connection with it, I see, or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted me to enjoy life, and the practice of the art, respected by all men, in all times.”
(Extract from Hippocratic Oath.)

“Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity

and honor. The obligation of secrecy extends beyond the period of professional services ; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by the physician, except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice." (Code of Ethics, Am. Med. Association.)

"A precedent in law is a mighty authority ; and I am quite satisfied that a point which has so often and so uniformly ruled, will never be ruled otherwise in the courts of Westminster Hall. I am also well aware that to law, and rules of court, we must yield, or the administration of justice would be impeded. But although satisfied on these points, I am not contented that we should be placed beyond the pale of those to whose private and confidential dealing with their fellow citizens such respect is shown. I will not go at large into this question, my design being merely to draw the notice of my brethren to the circumstance, and to put them upon their guard as far as possible ; yet will I say, that circumstances may occur in which a man of a delicate and honorable mind, being the depositary of certain things communicated to him, either under seal of professional or private confidence, would endure much ere he would reveal. It will at once strike the manly mind, that in regard to females we might be called upon to reveal that of which the promulgation would to them be worse than death." (Smith's Analysis of Med. Evidence.)

"We believe it to be the moral right and duty of medical men to refuse to disclose, in a court of justice, secrets intrusted to them in professional confidence, and we have always acted on such belief. If physicians become the repositories of secrets, under the full conviction, on the part of society, of our moral and professional obligations to hold them sacred,—secrets which otherwise

never would have been revealed,—who can believe that there is any earthly power which ought to wring them from us, or which can, if we rightfully understand our privileges and duty. If private confidence is thus to be broken upon every imaginary necessity, where is the end to the mischievous consequences that would arise, especially at this day, where every trial is published to the world through the medium of the public prints. The lawyer is shielded from the obligation of revealing the secrets of his client, on the ground that it is necessary he should be acquainted with the real facts in the case, for the purpose of conducting the defense, and because life and property are at stake. But we ask, if character and reputation are not often of equal value, and whether either of the former could be enjoyed without the possession of the latter? So also it may be observed, that the patient communicates freely with his physician, for the purpose of judgment; no circumstances whatever, will warrant their publication to the world. In the case of females, such a disclosure would be in the highest degree indelicate, and often worse than any punishment that could be inflicted.” (Charles A. Lee, M.D.)

Professor Stephen Smith says, (“*Doctor in Medicine*,”): “In whatever light we view this subject, the fact is constantly prominent, that the moral obligation of the physician to retain, inviolate, all communications of a confidential nature, is undisputed. By the Hippocratic oath he is not to divulge what he sees or hears, whether in connection with his professional practice or not. The code of ethics of the great governing body of this country pledges him never to divulge the privacies of personal and domestic life, nor the infirmities of disposition, nor flaws of character observed during professional attendance, except when imperatively required to do so. It is only in courts of justice that the seal of secrecy can be broken, and even here the peculiar moral obligations of the physician are acknowledged and respected.”

On the other hand, Professor Elwell, (*Malpractice and*

Med. Evid., p. 322), says : "The discovery, vindication, and establishment of truth, and the punishment of crime, are the main purposes of the existence of courts of justice. For this the rules of law are established, and to this end witnesses are put upon the stand, and they are to tell the whole truth, bearing upon the case, unless there is some special, powerful reason why they should not.

"The great interests of government, life, liberty and private property, all depend upon a well settled system of evidence, by the rules of which the whole truth may be as surely as possible brought out. Any privilege that a witness may enjoy, which permits him to retain in his own bosom a knowledge of facts bearing upon the case at issue, contravenes the great object of all law, just to the extent that this privilege from testifying is permitted to reach. As facts are taken or kept from a court or jury, the means of arriving at a just conclusion are abridged, and from the want of the light of these very facts, thus kept out of sight, the ends of justice may be defeated,—the guilty escape,—the innocent suffer,—and possibly great public interests may be endangered.

"The reasons then, if any, for permitting private interests to outweigh the certainty of judicial investigations and their results, should, it would seem, be cogent and convincing. The justification should be a complete one, that will permit a witness to refuse information, essential, perhaps, to the just solution of an important issue, possibly involving life. This information a privileged witness is permitted to refuse to give to a jury. Should not such a witness be subjected to the severest scrutiny, and confined cautiously and carefully to the exceptional cases where it is claimed greater evil will result if the truth is permitted to come out? A rule that limits the sources of information in courts of justice; that prevents truth from being followed into every channel, and brought forth from every lurking place; thus hazarding just results; is an exception and an anomaly in law, and should be subjected to all the disabilities of an anomaly."

All of which is very true. But, if on the grounds of public policy, attorneys are not permitted to disclose the secrets of their clients, in respect to property and reputation, on the same grounds physicians should have accorded to them the same right. To the statement that the object of the rule is to require that the "entire professional intercourse between client and attorney, whatever it may have consisted in, should be protected by professional secrecy," we may reply, the same reason applies with equal force to the patient and physician. To the statement that the attorney stands in the place of the client, we say no, no more so than the physician does who has received statements from his patient, the better to draw his diagnosis and to determine his treatment. "No interest, therefore, but that of the client, permits the attorney to refuse to give in his testimony in the case, and this interest, it is said, 'comprehends the entire professional intercourse between client and attorney, whatever it may have consisted in.'" (Elwell.) It is only the *interest* of the patient that the physician would subserve by the adoption of the same rule in his case. Mr. Chief Justice Shaw says: "So strictly is the rule held, that the privilege extends only to communications made by client to his attorney for the purpose of obtaining legal advice." This is all that physicians ask.

This right is now recognized by statutory enactments in some of the States.

Confidential Communications.—"No person authorized to practice physic or surgery shall be compelled to disclose any information which he may have acquired from his patient while attending him in a professional character, and which information was necessary to enable him to prescribe as a physician, or do any act for him as a surgeon." (Ark. Statutes, ch. 181, § 21.)

So also in California, (Cal. Stat., Hittell's ed., 1850-64, § 398,) "a licensed physician or surgeon may be examined, but only with 'consent' of patient."

So also in Michigan: "No person duly authorized," etc., etc., as in Arkansas.

Minnesota has a statute similar to California, limited, however, to "civil actions." (Ordranax Jurisp. of Med.)

Let us hope that the same equitable provisions will soon obtain in other States. In the meantime it must be remembered that "no matter how sacred the trust a confidential communication made to a physician or a divine, the law *forces* a disclosure." Whether the matter is relevant or not, is for the consideration of the presiding judge, the witness under no circumstance is to refuse the answer, on the ground of irrelevancy. (*Wright v. Wilkes*, Taylor's Med. Jurisp., ed. by Penrose, p. 42.)

The witness has an unquestionable right to express his opinion in his own way; he is not on the stand to answer any and every question counsel put to him; especially he is not to answer by 'yes' and 'no' without the privilege of explaining it. The bluster of counsel on these occasions may be quietly ignored. The court will sustain him in his endeavor to make himself thoroughly understood. This rule is to be particularly observed in "hypothetical" cases, where the form of the question is only limited by the ingenuity of the counsel. Do not form an opinion on a few *selected* facts.

The witness is to open to the jury the most ample view of all the facts which belong to the disputed transaction. Many facts, from their very nature, absolutely exclude direct evidence to prove them. Thus it is in questions of skill and judgment, the knowledge of the relations must be derived from those who are possessed of the proper qualifications for forming a conclusion on the subject. Juries in general are to form conclusions by aid of their own experience, but in this class of cases they cannot be presumed to possess that experience which will enable them to draw correct inferences from the circumstances, hence the expert is called, in order to obtain those inferences that only a few persons, exercising a particular

science, art or profession, are capable of drawing, and he will not be permitted to refuse to testify on any claim of privilege whatever.

INQUESTS.

In service before a coroner's jury, the medical witness should never give an opinion without demanding and obtaining the privilege of making a *post mortem* examination. For making this it is his right to demand and receive a fair compensation. As this is one of the medico-legal duties the general practitioner will most frequently be called upon to perform, directions in detail as to the best manner of performing it will not be out of place in this connection. In such examinations two physicians should be associated, inasmuch as the details are so minute that no mind could retain them all, therefore one should make a written record as the dissections are made by the other; notes should be examined and corrected immediately. Such notes would not be evidence, but the physician could use them to refresh his memory. In respect to whether these notes could be copied, and the copy thus used, there is some difference of opinion. It is usual not to permit such copy. In respect to the necessity for such notes, it is to be remembered that in many cases the medical witness' duties do not close with his appearance before the coroner. He will frequently have to appear, farther, before the criminal court, and there testify as to professional opinions, deduced from the appearances he has observed.

POST MORTEM EXAMINATIONS.

In an inspection of a body found dead the memoranda should show the date and place of examination. The following plan adopted from CASPAR, covers the essential points of such an examination:

EXTERNAL APPEARANCES.

1. Note the external appearance; apparent age; quantity and color of the hair; color of the eyes.
2. Position of the tongue.

3. Foreign bodies in the mouth, ears, nose and other natural passages.

4. Rigor mortis.

5. Color of body in respect to *post mortem* changes, putrefaction, *post mortem* stains, * tattoo marks, scars and condition of skin, as *cutis anserina*, etc.

6. Edema, emphysema.

7. Suspicious marks, whether *ecchymotic* or *post mortem*.

8. Appearances of posterior surface of body, hands and feet.

9. Appearance of neck and sexual parts.

INTERNAL INSPECTION.

1. CRANIAL CAVITY.

10. Condition of soft parts covering the skull, and condition of skull bones.

1. Condition of meninges.

12. Condition of brain as respects softening, congestion, extravasation of blood, and tumors.

13. Condition of the ventricles, choroid plexus, sinuses.

14. Condition of cerebellum, pons varolii and medulla.

15. Condition of basis cranii.

2. THORAX.

16. Position of the different organs, adhesions, color, extravasation or effusion.

17. Condition of the large blood vessels.

18. Pericardium, coronary veins, and condition of cavities of the heart.

19. Appearance and contents of larynx and trachea.

20. Condition and contents of œsophagus.

* "No incision into a *post mortem* stain, be it ever so deep or bold, will ever give vent to effused fluid or coagulated blood; at the most there will be but a few bloody points, the result of cutting across some small veins of the skin, whilst in the smallest *ecchymosis* the effused blood will at once be brought to light by the incision." (Caspar, vol. 1, p. 19, New Sydenham Soc. Pub.)

21. Condition of pleural cavities, in respect to effusions and adhesions.

3. ABDOMINAL CAVITY.

22. Organs, position and contents of ; ulcerations, tumors, or perforations.

23. Pancreas.

24. Liver, gall bladder, condition and contents.

25. Spleen.

26. Mesenteries and omenta.

27. Kidneys, congested, fatty, waxy, etc.

28. Bladder and its contents.

29. Vena cava, aorta.

At the close of the examination express briefly the opinion that—

1. The deceased died of——— or from———.

2. The probable time of death.

3. Explanation of any unnatural marks or appearances, whether sufficient to cause death.

It may not be necessary to add that the physician is not to hazard an opinion, in a case of suspected poisoning, from a mere *inspection* of the stomach, as to the causes giving rise to the *appearances* observed. It might be replied to a question, that the *appearances might* depend upon poison, but that is a question to be decided by chemical analyses.

In drawing up reports and in giving opinions orally, physicians are too apt to give the *remote* rather than the *present* cause of the appearances presented upon *post mortem* examination. Thus the stomach of one supposed to be poisoned is found to have patches of inflammation scattered over its internal surface, and the physician, if not very careful, will say or write, “the appearances are of *poison*,” when he should have said “appearances of *inflammation*” of the stomach.

CHEMICAL ANALYSES.

In respect to chemical analyses in cases of poisoning, general practitioners have but little if anything to do.

This is the province ordinarily of the analytic chemist, who is presumed to have all the apparatus needed for making such analyses. A theoretical knowledge of the processes in such analyses is however expected of the medical expert. There are duties, however, in this connection that fall to the physician alone, the proper performance of which will not only reflect honor upon him, but will favor the ends of justice. This duty relates to the symptoms during the last illness, and to the performance of the *post mortem* examination, and the proper preservation of such parts of the body as are deemed necessary to be examined.

It will frequently happen that the physician who is called upon to make the *post mortem* examination, has attended the dead person through his last illness, he should therefore be well informed as to what are the evidences of poisoning in the living body. When did the symptoms he was called to treat first manifest themselves, and was the individual in good health immediately prior to the present illness? Did these symptoms occur immediately or soon after eating or drinking, and did others partake of the food or drink at the same time? If so, are they affected similarly? In irritant poisoning, pain, vomiting, and purging, are the first prominent symptoms. In what order did they occur? In a recent trial for murder by poisoning, it was intended by the defense to make it appear that the symptoms during life were to be referred to cholera morbus, which, at the time of the death, was prevalent in the community. But in cholera morbus the vomiting and purging are simultaneous. Cholera also in its malignant form may rapidly end in death, but it should be remembered that its symptoms are directly the reverse of irritant poisoning.

Inquiry should be instituted as to the habit, idiosyncrasy or recent disease that may have been present.

I have had recently a patient under my charge for glaucomatous symptoms, who regularly used sixty grains of morphine every seven days, or a trifle more than the

third of a grain an hour, an amount sufficient to bring about, as a rule, a fatal narcotism in one not used to the drug. On the other hand, Dr. Christison relates the case of a person unaccustomed to the use of opium, who took nearly an ounce of good laudanum without any effect. This same idiosyncrasy may convert substances used as food, harmless in themselves, into virulent poisons. I am one of those unfortunates who dare not eat oysters. Their injection is uniformly followed by an irruption of urticaria, cramp in the stomach, vomiting and purging, accompanied by a decided chill, and excruciating intestinal pain. Muscles, fish, pork, mushrooms, have been observed to give rise to the same train of symptoms in others. Hasty conclusions should therefore not be published, for symptoms alone should never decide the question. "At best they only justify an opinion in favor of poisoning as probable."

What are poisons? The definition given by Dr. Guy would seem to answer the inquiry so completely that I here give it. He says: "A poison is any substance or matter, solid, liquid or gaseous, which, when applied to the body outwardly, or, in any way introduced into it, without acting mechanically, but by its own inherent qualities, can destroy life." The term is an abstract one, like a "deadly wound," "insanity," and such like terms, which nearly every one thinks he has a definition for. The above is not free from criticism, but for all practical purposes it is sufficient.

The expert should make himself familiar with a brief yet comprehensive classification of poisons. That given by Dr. Guy is here given in a tabulated form.

POISONS.

- | | | | | | |
|---------------|---|---------------|-------------|---|-------------------------------|
| 1. Inorganic. | { | a. Corrosive. | 2. Organic. | { | a. Irritant. |
| | | b. Irritant. | | | b. Affecting the brain. |
| | | | | | c. Affecting the spinal cord. |
| | | | | | d. Affecting the heart. |
| | | | | | e. Affecting the lungs. |

(To be continued.)

ARTICLE II.

ALCOHOL — ITS THERAPEUTIC ACTION AND
REMEDIAL AGENCY.

Read before the Woodford County Medical Society, at its Semi-Annual Meeting, at
Minonk, January 5th, 1876.

By JAS. S. WHITMIRE, M.D., METAMORA, ILL.

Mr. President, and Gentlemen of the Society: At our last Annual Meeting, at El Paso, I was designated, by our President, to submit a report at this meeting upon the therapeutic and remedial agency of alcohol in the treatment of disease. I cannot promise you that this much-abused article—as a beverage, by its recipients, and, also, abused on account of its use by another class, who conceive it to be the refinement of abomination, on the one hand; and on the other, by a different class and for greatly different reasons, laud its virtues to the skies as a therapeutic and remedial agent—will receive anything like a complete and critical examination, in all its bearings in regard to its effects on the economy by me, because our ablest therapeutists and most learned physiologists and pathologists have not, as yet, fairly settled the question as to whether the action of alcohol, in any of its various forms, is a heater or a cooler upon the animal organism. In other words, whether it is a promoter of life force by its oxydation in the blood and tissues, or, whether its ultimate effects are not to produce enervation by the direct poisoning of the blood and tissues of the body, the obstruction of molecular changes, and lessening the natural secretions of the glandular system. In regard to the mooted question, with respect to its pernicious or other effects upon the healthy animal organism, when its use is abused, or even when temperately used, I am not called upon in this connection to either advocate or condemn, because there will always be an abundance of controversy among enthusiasts, pro and con, in regard to it. I am called upon, however, i

this place to inquire into its therapeutic action and curative agency in disease, and while my investigations may compel me to treat somewhat of its physiological action on the economy in disease, it is more than probable that my conclusions may be neither agreeable nor satisfactory to either of the exclusive factions.

There are two theories in regard to the therapeutic action of alcohol—one, that it is a direct and positive stimulant, and the other, that it is a sedative by producing paresis, or want of sensibility, in the vaso motor system. In regard to these, they may both be right in one sense, and both wrong in another, according to circumstances, and because of the conditions under which it may be administered. The stimulant theory is supported on the ground that it gives increased force and frequency to the heart's action; that additional energy is transmitted to the muscular system, and that it produces temporary exaltation in the mental faculties. On the other hand, it is claimed, notwithstanding the effects mentioned as favoring the stimulant theory, that these apparent effects may be accounted for on different and more rational grounds than that of direct stimulation, and these are, that alcohol possesses a food-producing force, and indirectly nutritious qualities, which, by promoting digestion and sanguification, prompts a more thorough appropriation of food to nutrition; and that the saving thus effected to the general system, more than counterbalances the waste of the tissues which is implied by increased vital action. From the direct effect of alcohol upon the general system, and especially that of the nervous functions, there is produced a paresis of the capillary vessels, and more especially of the cutaneous surface, which is propagated specially through the vaso motor tract. On account of this want of excitability of the capillaries, they become abnormally filled with blood, which is only relieved by a great increase of cutaneous transpiration, and also by increased exhalation from the lungs; these both being cooling processes, the tempera-

ture of the body is kept in its normal condition ; hence the apparently stimulating effect produced by liberal—but not too abundant—potations of alcohol are entirely counterbalanced through and by natural chemico-physiological law.

Alcohol is considered by Dr. Pavy, of London, who has written a late work on Dietetics, as intermediate, as food, for the production of *life force*, between the hydrocarbons, or fats, and the carbo-hydrates, as starch and sugar. He also accepts the demonstrations made by Anstie, Dupre and others, which establish the fact that ingested alcohol is practically and wholly destroyed within the system, hence, his obvious conclusions are, that if this be the case, it may be fairly assumed that the destruction of alcohol in the system is attended with oxydation, and hence, a corresponding liberation of force, unless, indeed, it should undergo some peculiar change or metamorphosis into a principle to be temporarily retained, but, nevertheless, ultimately to be called upon by the requirements of the system and applied in *force* production.

In this day of scientific research, investigation and progress, it will not do to assume a certain state of facts to be true, and then because a certain class of conditions exist, go to work and construet a theory from these conditions that goes to show or support the truth of the original assumption. That day has passed away with many unfounded theories of the past, and a new era has been ushered in, where everything, material and apparently immaterial, must be placed in the chemist's crucible, and subjected to the heat of intellectual fire, where it is purified, and separated into its ultimate elements and original constituents by the magnetic battery of reason, before a fact is established, upon the basis of which we may establish axioms. When once our axioms are constructed by such process, we then have unqualified data from which we may deduce our theories, and from which rational deductions must necessarily result.

Hence, in our day the therapeutic and physiological action of alcohol upon the animal organism, either in health or disease, is no longer hypothetical, but its mode and manner of action is a fact fixed and proven to exist, not only by philosophical experiment, but also by its chemico-physiological relations to vital force. Experience had long since taught the early members of our profession that alcohol, in its various forms, was not only a certain but a powerful remedial agent in the treatment of the low grades of fever, and also, in acute diseases where the lamp of life was barely flickering with a sickly flame, when nervous prostration and want of vital force was the principal impediment to recovery; but it was not till within the last decade that chemico-physiological research has demonstrated the true position that it occupies as a remedial and restorative agent, by the minute and searching investigation of its chemical affinities in the living organism and the relations that it holds to other ingesta that is common for the nutrition of man. Within this very brief period, we have demonstrated the why, the wherefore, and the very nature of its action on the economy in both health and disease, and had pointed out to us the various conditions that are appropriate for its remedial administration; and hence, we may now prescribe it with an almost mathematical precision and certainty as to its ultimate results; therefore we no longer grope our way in the dark as those who preceded us were compelled to do, administering alcohol and other drugs simply and purely upon theoretical grounds. Now, when we see our patients lingering for the want of vital force; when we find them dull and stupid and in a condition of low muttering delirium, with subsultus tendinum from inanition, or nervous exhaustion, it matters not what the cause of the prostration may have been, we know from the condition present, and in connection with physical diagnosis, that our patient needs nourishment in connection with alcohol in some of its forms, in order that the latent fires pent up in the organism may be made to burn

and rehabilitate the vital forces. He needs food for the muscular tissue to supply the waste ; food for the cellular and connective tissues to supply their decay ; food for the osseous or bony structure, to rebuild its wasting strength ; and phosphorized food for the nervous system to rekindle its rapidly waning magnetic fire and restore its wonted functions. In the condition that we now find our patients, we know what they need, and the thing to be accomplished is, to see that the necessary nourishment for all these tissues is provided in abundance, and properly prepared for such digestion as the stomach is capable of performing, and made ready for assimilation. When this is once accomplished, the tissues of the body, which have been undergoing continual waste and disintegration, will be reconstructed by the appropriation of this food to the several tissues, according to their wants. The breaking down and building up of these different structures, you are aware, are accomplished by vitalized molecular change and interstitial development of new cell structure. These things must all be accomplished through and by the integrity of the vital forces, and these forces must be kept alive by ingesta that contain a heat-producing force or power. It is then apparent that some of the alcoholic beverages, along with the simplest character of nitrogenized food that contains principles that are the most easily oxydized, should comprise our selections for this purpose ; because, in the chemico-vital union of that element (oxygen) with all the carbonaceous and effete matters of the system, from whatever source they may have been derived, heat, and consequently vital force, is evolved, and this is taking place in every organ and tissue of the body continually, in the living organism. Therefore, it is through this vivifying, life-giving and life-sustaining principle (oxygen) that the rudimentary construction cells are formed, and that are continually forming in every structure, organ and tissue of the body and preparing to take the place, by assimilation, of those parts that have served their purpose, broken down and been carried out of the economy as of no further use.

From the careful study and investigation of the foregoing facts, in all their rational bearings, it may be seen that invalids and aged persons who contain a large amount of latent or undeveloped force or power, may be greatly benefited by the moderate use of some one or another of the milder alcoholic beverages ; because, as we stated in the beginning of this paper, these beverages, used in proper moderation, and under appropriate restrictions, facilitate digestion by their temporary stimulation, and remotely, they furnish some nutriment upon which vitality feeds, and by its own destruction by oxydation facilitates sanguification, and thus causing a more thorough appropriation of food to nutrition. Therefore, these invalids and aged persons, by the use of these beverages, will have their nutrition increased, their warmth promoted, and consequently their latent force or power developed and brought into action, and their moving, working, active power, whether it be mental or physical power, greatly augmented. This being the case, —I may say the facts in the premises, —who is there in these days of enlightened reason, who is bold enough to discard this powerful restorative agent, (alcohol in its various dilute forms), in the promotion of health and longevity, from our catalogue of medicaments, or even from our list of nutritive dietetics and restoratives ? Enthusiasts may prescribe its use under any circumstances ; zealots may consign it to the halls of pandemonium ; but enlightened reason will always pronounce a benediction upon it.

It is argued as against the use of alcohol as a medical agent, that it is apt to create an unnatural appetite in the recipient for the habitual and unnecessary use of the article, and that in such case there will result a lasting and untold evil to the individual ; and besides, it would, by example, spread a baleful influence in the society where it was used. This may be all true as a matter of fact, but I apprehend that in 99 per cent. of all the individuals who abuse the use of alcoholic liquors, they have

learned to crave it from a habit contracted from other sources than that of the educated physician. That the habitual use of alcohol, when it is not absolutely needed to accomplish some needed purpose in the economy, is detrimental to health, there can be no doubt; but that it is so certain to create an abnormal and insatiable appetite that it will lead to its abuse, is more problemetical—it is simply hypothetical; and for this reason we cannot afford to give up a positive and substantial good for fear of an imaginary evil.

In this connection we have only been called upon to inquire into the remedial agency of alcohol in disease, and the conditions under which it exerts its most favorable influence as a therapeutic agent, and to illustrate the most probable theory of its action as a force producing power. This we have endeavored to do to the best of our ability, and we are satisfied with the conclusions to which we have arrived. And in this connection we will simply remark that the evil effects that result from the abuse of any powerful agent can never be allowed as an argument against its use; but the evils produced by the abuse of alcoholic beverages are incalculable—they are beyond computation, and their influence is felt for the worse in the degradation of individuals in every community. Against this evil we can only point out its dangers by pointing to the utter ruin produced by their indiscriminate and unnecessary use; and against its use we may encourage philanthropy and morality to continue their crusade even to the extent of the utter abolition of its use, excepting by and with the advice of a thoroughly competent, educated and conscientious physician.

ARTICLE III.

THE BEST TREATMENT OF CANCER.

BY J. E. NICHOLS, M.D., OSAGE, IOWA.

Cancer affords a large field for observation, study and careful experiment at the present day. Dr. Marsden, in his little work on this subject, says: "Only a few years since, hospital physicians and surgeons of the highest standing, as well as general practitioners, gave the poor sufferers from cancer who applied to them but one reply, 'your case is hopeless; we can be of no service to you;' and they spoke the truth."

If this is true of a few years since, what reply is made to this class of invalids by the regular profession at the present enlightened time? Whatever the reply may be, I am satisfied that enough is not done by general practitioners everywhere to save this class of unfortunates from that large list of charlatans styled "Cancer doctors." Everything going to their shops is cancer, and is sure to be *plastered* out, the merest wart being dragged out with as much sound tissue as suits their purpose, and is preserved and paraded as a terrible cancer. To give an idea of their doings let me cite the following cases:

CASE 1. Mrs. F——, of our place, aged about forty-five years, long an invalid, had, about a year ago last spring, a ligneous scirrhus, globular, of the left mamma, extirpated by the amputation of the entire left breast. It shortly returned as a "crab cancer," or radiated or branched scirrhus, and was again extirpated about a year ago the last fall. It speedily made its appearance again and extended over the entire left side of the thorax and into the axillary, her general health failing now very rapidly. While in this condition, one year ago, her husband spoke to me with regard to the employment of the "cancer paste" described on page 204, vol. 30, of the CHICAGO MEDICAL JOURNAL. I advised the use of it upon portions of the cancer, as she could bear it, and thought

that if the system was properly sustained with good food and tonics, there might be some chance for improvement in her condition. But an old lady, living in a metropolitan city not a thousand miles from here, got her circulars before the patient, and the result was an immediate departure for the place of big promises. Paying her three hundred dollars in advance, and promising three hundred more as soon as the cancer was out, she had a large plaster of escharotic paste clapped on over the entire morbid growth, was informed that it would either kill the cancer or herself, and was left for forty-eight hours to the most excruciating torture that it is possible for human invention to inflict, although large quantities of whisky were administered to "deaden the pain." The side was then poulticed for several weeks, and an eschar was removed from the entire side and axillary, and she was allowed to return home, bringing the largest ulcer I ever saw upon a living human body. It gradually filled with granulations, and has steadily diminished in size from that time till now, with occasionally pain and swelling of the shoulder and arm, but with no appearance, as yet, of scirrhus.

With regard to this case, I am confident that if other means than the knife had not been resorted to, the patient would have died ere this. I also believe that a judicious use of escharotics, in the hands of a skillful surgeon, would have resulted in less pain and a more speedy cure by avoiding such extensive destruction of integument, with as perfect death to the cancer. This case establishes the fact that no limit can be fixed to human endurance.

CASE 2. Mrs. B—, of an adjoining county, being similarly afflicted, and having been operated on by the knife, hearing of the above case, went to the same old lady, underwent the same torture, and returned home, to die very speedily.

CASE 3. A lady of P—, Illinois, learning of Mrs. F.'s case, also went to the same woman, underwent great torture, and died a martyr to quackery.

CASE 4. Mr. J. D. S——, about thirty-five years of age, in good general health, applied to me April 14, 1874. He had a small hard point beneath the skin on the upper lip, just below the left nostril. Had been two years in forming, with occasionally pain shooting from it, and now and then a bleb or little scab appearing over it on the skin. He had lost a sister and another near relative by cancer, and I was induced to believe this an epithelial cancer, and applied the paste, before referred to, covering about one-fourth of a square inch of the integument.

April 16, I removed the paste, and ordered simple cerate dressings, which were continued six or eight days until the eschar sloughed out, and the wound had closed up with healthy granulations. I congratulated him upon so easily disposing of the source of so much uneasiness and alarm, as he had been very anxious about it for a long time. He was well pleased at first, but soon returned with the complaint that he experienced "drawing" pains and "peculiar feelings in the part," and feared it was not all out. The surface exhibited slight excoriation, but I attributed this to the action of an acrid discharge from catarrhal inflammation in the nostril. He appeared only half satisfied, and again consulted me with great alarm lest more of the cancer still remained. I advised him to rest assured that if there were still cancerous particles left, they would speedily begin to develop themselves, and that it would then be time enough to remove them. The next I heard from him was through a letter from the town of A——, in Illinois. He wrote to assure me of his every confidence in me (?) but had thought to consult those who treated nothing but cancer. He had first visited the old woman of the above cases; but becoming disgusted by her ignorance, had gone to a *he* cancer doctor, who told him that what had been done was well enough *as far as it went*, applied paste and poultices to a large part of the upper lip and produced a shocking deformity. Mr. S. returned happy in his mutilation, safe in the conviction that the cancer was now

laid ; but the same "drawing pains, etc.," returning, he again became alarmed, and fled to the doctor at A—. Having been paid for perfecting a cure there was no further profit in more treatment, so he told S. to rest assured that it was all right and sent him back. He is not fully at rest about it yet, and whether he will visit other cancer doctors, and pay them large figures for removing portions of his face, as long as any *face* is left, remains to be seen in the future. He no more required the last operation than he needs one now, and I am quite sure that he has no cancer at present, yet his agonies no doubt are as genuine as if possessed of true scirrhous or epithelial cancer.

While it is true that these so-called specialists pronounce every simple tumor, or ulcer, cancer, and speculate on the fears of their victims, it is none the less true that they do occasionally permanently remove true cancer. I have known of several cases, where the cancer had returned after extirpation with the knife, that they have successfully treated. People have a passion for the mysterious, and more willingly pay out their money, and risk their lives and health, for a secret medicine than for a sensible treatment that they can understand in all its details. Yet I am convinced that we have well known agents that are better for the treatment of cancer than the exclusive employment of the knife, which is so greatly feared, and is almost invariably avoided until the most favorable time for treatment is passed. If the entire profession would familiarize themselves with their use, I am satisfied that cancer doctors would be compelled to seek other employment, and possibly might become honest. With the agents to which I refer, I believe every practitioner could keep his field of labor almost, if not entirely, free from cancer cases.

The following cases are not entirely void of interest:

CASE 1. Mrs. J. B—, aged fifty years, sent for me Dec. 10th, 1873. Has been scrofulous and an invalid several years. No cancer in her family. For several

months a small, hard, painful tumor has been coming on the gums of incisor teeth and roof of the mouth, obviously caused by wearing false teeth on an illy fitting rubber plate. Some five weeks before, a little-pill fellow had bunglingly endeavored to extirpate it with a pair of scissors and table fork. It had grown very rapidly from the time of that mutilation, and was now as large as a walnut. Diagnosed it to be an epithelial cancer. Treatment. — $\mathcal{R}$. chloride zinc, pulv. blood root, *aa* q. s. Rub together in open air till it forms a stiff mass or paste. Put enough on cotton wool to cover the entire surface of the cancer, wedge more cotton wool between it and the upper lip, tell her to avoid allowing the saliva to come in contact with it as much as possible, and instruct her to remove it and have the paste wiped entirely out of the mouth when she has had it there long enough to become tired.

Dec. 11th. Patient had left the paste in position about two hours, and on examination I found a white thin eschar over the entire surface of tumor, and detached and loose in places. Pocketed some paste under the loose parts of eschar, and applied more on the surface as before. I returned in about two hours and removed it myself.

I repeated this process for ten days, each day removing detached parts of the eschar, and applying fresh paste, both by pocketing it under loose parts of the eschar and on cotton wool. At the end of this time the wound presented that freedom from cancerous particles that one soon learns to recognize in using this paste. The applications were quite painful at times, but not dreaded as would have been the knife. She said when it was all over that she would rather undergo it all over again than have the scissors employed as they had been, even for a few minutes.

During treatment I prescribed for the general health as follows: $\mathcal{R}$. tinct. ferri. perchlor., acid. phosphor. dil., *aa* M.x; aquæ, $\mathfrak{z}$ ij. Misce. Sig. Take it morning

and night. This was followed for a few weeks with R. brom. potass. 3 iij, syrup simp. 3 vj, fl. ex. nux vom., fl. ex. mandrake, aa f. 3 ss. Misce. Sig. Teaspoonful three times a day. There has been no return of the tumor, and good health has prevailed up to the present time.

CASE 2. Miss S——, aged twenty-eight years, deformed by hip disease and curvature of the spine. A sister had cancer. Sent for me Jan. 13th, 1874. Small, round tumor, caused by pressure of a projecting tooth, on the inside of lower lip near the margin. Very painful of late, and growing rapidly. Diagnosed it epithelial cancer. In its treatment I cut a hole in a piece of adhesive plaster, to correspond to the size of the tumor, and pressed it down around it. Put the paste on a quarter of an inch thick over the surface of the cancer, and covered all with a patch of plaster. Jan. 15, removed the plaster and paste, exposing a perfect eschar surrounded by not very extensive swelling. Declares that there has been no pain to speak of. She has suffered great pain during her life, which may account for this indifference. Directed her to keep the place covered with court plaster, which was continued about twelve days when the eschar had fallen out and the wound healed. This lady was kept on the iodide and bromide of potash for several months, and has had a good degree of health and no return of cancer up to this date.

CASE 3. Mrs. M——, mother of five children, in feeble health and a victim to the habit of opium eating. Was called to her Jan. 22, 1874. There had been an amputation of the left breast for ligneous (globular) scirrhus, by Dr. S——, some three months before my visit. It had healed kindly, but for the last month the cicatrice had been sore and swollen, with "darting pains shooting from it into the chest." On examination I discovered three points of what appeared to be scirrhus growth. Surrounded them with plaster, and applied the paste.

Jan. 28th. The eschars all out. One was two-thirds

of an inch long, one-half an inch wide, and five-eighths of an inch in depth; another, one and one-half inches long, an inch wide, and an inch and one-fourth in depth. The other was between these two in size. Poultices had been used after the paste had been employed for forty-eight hours, and were continued until nearly healed, which had occurred at the end of a month. No recurrence up to date.

CASE 4. Mrs. Mary C., aged thirty-five years, in good health, called at my office Nov. 14, 1874. Has had a small, painless lump just beneath the skin, on the cheek, for the last two years. Hardly knows when it first came, and is aware of no cause. None of her relatives have ever been subject to cancer, yet she has been very uneasy of late, fearful that this is a cancer. Diagnosed it to be a simple, insignificant, little *lump* of broken-down, effete particles. Prognose that it will never amount to more than what it now is. "Can you remove it without any cutting?" is her inquiry. I reply that I can. "Will it make a bad scar?" "No." "Then please remove it," is requested, and I forthwith apply the paste, instruct her to remove it at the end of the second day, and then apply court plaster until it comes out and gets well. I saw her a couple of days ago, and observed that it was healed nicely and the cheek smooth, with a very small scar that will become much less. While any one has any little permanent tumor of that nature, which they do not understand, they suffer from the constant apprehension that it will eventuate in cancer, and if the family physician, whom they usually repose confidence in, merely poh pohs at it, they will visit a cancer doctor and pay a round price for its removal. The above case is a fair sample of over twenty that have applied to me during the last twelve months. In fact, scarcely a day goes by without some wart or diseased point, of no significance, is exhibited to me for the purpose of gaining my opinion. If they still manifest uneasiness after being assured that the troubles are harmless, I proceed to remove them. If

I was a cancer specialist I could soon amass a small fortune; as it is, I have cases come from a long distance for treatment of cancer.

CASE 5. Nils Anderson, a Swede, fifty years of age, from Forest City, sixty miles west of this place, came to my office Dec. 21, 1874. Has had a little scabby sore on his under lip the last six months; lately it has grown very rapidly, and has become very painful. It now occupies the entire under lip, is red and purple on its surface, and is seamed and squamous near its centre, discharging an acrid fluid. [I send a picture of this case, just as he came to me, to the editors of the JOURNAL]. Diagnosis, epithelial cancer. Dec. 22. Apply the paste. Dec. 23. As the paste has become dry and baked, I remove it and apply a fresh quantity. Dec. 24. Remove the paste and apply bread and milk poultices. Dec. 30. The eschar comes away this morning on removing the poultice. It is two and a half inches long, three-fourths of an inch wide, and five-eighths of an inch thick, at its greatest diameters. Some of the cancer remaining near the right angle of the mouth, I apply the following: *R.* arsenious acid, 3ij; mucilage gm. acacia, 3j. Make into a stiff paste, apply it over surface of cancer, press a fold of lint down over it, and when it becomes hardened cut away surplus lint with scissors. This is Dr. Marsden's "Cancer Paste," and should be used on not more than one square inch of surface at one time. I like it where the greater part of a cancer has been removed, and only a point or two of it is left behind in the wound, as this paste has more of a special election for the cancer than the zinc paste, and will not destroy so much of the surrounding healthy flesh, even when used in excess. Jan. 1st. Removed this paste by soaking it off with warm water, and have applied poultices ever since. A deep line of demarcation is now formed around the remaining part of the cancer and I expect it to drop out in a day or two more. The rest of the wound, on the left half of the lip, is filled with healthy granulations, and is healing

finely. I will report the result of treatment in this case at some future time.

CASE 6. Mr. F. Cole, a young man whose case I mentioned on page 206, vol. 30, of the CHICAGO MEDICAL JOURNAL, as having been before our County Medical Association at one of their meetings, with a tumor in the antrum of Highmore, with regard to which the universal verdict was that the right superior maxillary must be extirpated, and which I was then removing by the occasional application of paste through a small opening formed by the removal of several teeth, which the tumor had nearly crowded out. The tumor continued to form rapidly, as I removed it, and as Mr. C. lived some distance from my office I did not see him as often as I desired, yet in six months from the time of making the first application, it was entirely free from all morbid growth, and the plates of bone that had been crowded out, so extensively as to cause a very great deformity, had contracted very much. Now the parts have so nearly assumed their natural relation that it is only close observation that detects any deformity. Tr. of iodine and sol. of argenti nitras was used alternately, in the antrum, after the removal of every vestige of the morbid growth. A few scales of bone came away. In all this treatment he suffered not a particle of pain, and was not hindered a day from his labor, as he called on me only as he came to town on business. The result in this one case pays me for all the annoyance I have had from the employment of the paste; yet this is but a small per cent. of benefit resulting from its use during the last three years of my professional labors.

I do not advise the entire abandonment of the knife in cancer. On the contrary, I should very much dislike to undertake some cases without permission to employ it. In case of a large cancerous growth, as scirrhus of the breast, the shortest and most humane way to a cure would be, first, its extirpation with the knife; and second, the use of the paste on any new growths that would

start up in the cicatrice. But in these numerous cases of imagined cancer, as well as uncertain tumors and genuine epithelial growths, I should in every instance advise the paste. While removing one of these uncertain growths, you may be nipping in the bud a very serious malady. Many times, when the knife alone is advised, the patient will object to an immediate operation, and have the treatment delayed until more positive of its malignity, and soon awaken to the knowledge that it has gone too far for successful extirpation; while, on the other hand, if the paste had been advised, the patient would not have delayed an hour, and both he and his physician might never know that his life had been so nearly endangered.

On the whole, I believe that many lives that would otherwise be sacrificed, may be saved by its timely employment.

Besides causing an eschar, the paste excites healthy inflammation in the parts around the point of application. I have taken advantage of this quality, and used it to rouse up indolent ulcers and other chronic troubles which I may think worthy of another article at some future time. Meanwhile let me ask my professional brethren to give this agent a fair trial, and let it stand or fall according to its own merits.

Progress in Medical Sciences.

ARTICLE I.

REPORT ON PRACTICAL MEDICINE.

By NORMAN BRIDGE, M.D., CHICAGO.

1. Hodgkin's Disease. By W. H. TRIPLETT, M.D. (*Richmond and Louisville Med. Jour.*, April 1, 1874.)
2. Cerebral Rheumatism. By Prof. J. M. DA COSTA. (*Am. Jour. Med. Sciences*, Jan., 1875.)
3. Parotiditis in Acute Diseases. By Prof. CROCQ. (*Jour. de Med.; Med. Times & Gaz.*)
4. The Hypodermic Injection of Atropia in Sun Stroke. By J. R. BARNETT, M.D. (*Am. Jour. Med. Sciences*, Jan., 1875.)
5. Muriatic Acid in the Treatment of Typhoid Fever. By S. K. CRAWFORD, M.D. (*Transac. Ill. State Med. Soc.*, 1874.)

1. Dr. Triplett read a paper giving an account of two additional cases of Hodgkin's disease, and reviewing the literature of the subject. The first case was in a woman forty years old. She had presented herself five years before, with large painful tumors of the right mamma; they were enlarged lymphatic glands, but so resembled carcinoma that it was diagnosed as such. In fifteen months these tumefactions had disappeared, and appeared "under her arms and all over." "Enormous tumors occupied the axillæ, growing over and around the anterior walls; her neck was full of small ones." There were small tumors along the arm, and large ones in the inguinal regions. None of the tumors suppurated; "they were soft, elastic, painless." The patient was still living, said the doctor, "a year ago." The other case was in a woman sixty-five years old, who had always enjoyed good health until 1868, when she had pneumonia, making a speedy recovery; she had afterward eczema and sore nose in winter. "Fifteen months ago she noticed small lym-

phatic tumors in the neck." Soon after one appeared in the right axilla, which subsequently disappeared. In the winter of 1872-73, she had another pneumonia, making a slow recovery, and in the following spring, "there was an explosion; the diseased glands suddenly showing themselves all over the body;" "they rapidly grew to immense size." At the writing of the paper the abdomen was tumid and tender to touch, but the liver was not enlarged, neither was the spleen; there was no cramp, diarrhoea, constipation, or dyspepsia; the appetite and digestion were good. Indeed, all the physiological functions were normally performed, with the exception that there was slight dyspnoea, although by auscultation no abnormal sound further than slight mucous rales could be demonstrated.

The enlarged glands were of all sizes, from that of an almond to that of a turkey's egg. The red corpuscles of the blood were not decreased—the white ones were slightly increased; the blood was not leucocythæmic. He insists on the characteristics of Hodgkin's disease about as follows: It is not connected with any known diathesis; it begins by slight enlargement of a few lymphatic glands, chiefly those of the neck, this stage lasting a few months or years. This is followed by an explosion, when it seems that almost or quite every gland in the body becomes suddenly enlarged. The physiological functions remain long unaffected, and the patient dies by the exhaustion largely due to mechanical pressure. No treatment is of any avail.

2. Prof. D. applies the term cerebral rheumatism to all cases of acute rheumatism that are accompanied by such decided cerebral symptoms as appear to constitute the real feature of the disease. He records, as illustrative of his subject, twelve cases.

In the first, after apparent convalescence, Bright's disease appeared, followed by hebetude, stupor, suppression of urine, and death.

In case 2, the cerebral symptoms occurred during a relapse of joint affection, stupor and delirium occurred, albuminous urine with granular and oily casts, and death.

In case 3, stupor occurred in the course of a mild acute rheumatism ; there was no heart trouble ; death resulted.

In case 4, there was marked delirium of hysterical type, with no headache or high temperature. Death occurred from exhaustion in the ninth week of the disease.

Case 5 was one of acute rheumatism, with pericarditis, restlessness and delirium, with recovery.

Case 6 had endo-pericarditis, delirium and stupor, but without headache, and resulted in death.

Case 7 had pericarditis, delirium, muscular tremors, gradual sinking, and ended in death.

In case 8 there were restlessness and hysterical manifestations preceding stupor ; headache, spasmodic contraction of facial muscles, coma, and before death, a temperature of 108 1-5 degrees.

Case 9 had delirium, one sided facial palsy ; slight motor paralysis of muscles of arm and leg of same side, and gradual and complete recovery.

Case 10 was one of cerebral rheumatism, terminating in a typhoid condition, with no cardiac and slight joint trouble. The temperature was not over 102 degrees, and death resulted in sixty-five days from the beginning of the attack.

Case 11 was one of acute rheumatism, with no cerebral or heart symptoms, but with typhoid condition and recovery ; yet at one time the temperature reached 110 degrees Fahrenheit.

Case 12 had marked delirium and stupor, coma, apparent death, and recovery under inhalations of ammonia and stimulants.

The only autopsies procurable in these cases revealed : in case 2, no cerebral lesion ; in case 3, soft coagula in arteries of the base of the brain, but no firm clots ; in case 4, the vessels of the choroid plexus highly congested, the branches of the middle meningeal arteries, many of them, occluded by fibrinous plugs.

In commenting on the pathology of the affection he was struck with the slight thermometric fluctuation. His observations negative the commonly accepted doctrine, that "hyperpyrexia in acute rheumatism and brain symptoms are synonymous."

He believes that leaving out exceptional cases of real rheumatic meningitis, the true pathology of the cerebral disorder is to be found in the action of rheumatic poison on the brain ; but that this poison may fasten on the lining membrane of the small cerebral vessels and lead to plugging of them. Occasionally an embolus from the heart is washed to the brain and plugs up a vessel, but more usually such plugging is due to thrombi there formed. Hyperpyrexia results where the rheumatic poison acts on the *nerve centres regulating temperature*.

The idea that quinia or other drug, in medicinal doses, has any power to produce this disorder, he believes nonsensical. Cerebral rheumatism is much more common some years than others, but our author can find no meteorological condition to account for the fact.

Cases occurring suddenly, formerly called apoplectic, are, he thinks, mostly uræmic, and he insists on the urine always being examined.

3. Prof. C. has carefully studied the subject of parotiditis as a sequence of acute disease, and his conclusions as to its nature and causation differ from those of many authors. In his opinion it is not due to pyæmia, but occurs in those diseases wherein there is stomatitis, and as a result of this. The inflammation of the mucous membrane of the mouth travels up the duct to the gland. When the soreness of the gland is first noted, and long before any suppuration can have taken place in the mass of the latter, purulent matter may be squeezed from the mouth of the duct. In the advanced stage of typhoid or typhus fevers, in rubeola, variola and scarlatina, as well as in the reaction of cholera, stomatitis is either a distinc-

tive or a frequent occurrence; it is in these diseases the disorder in question most often occurs. He claims that the parotiditis never precedes the stomatitis. The idea of the old authors, of a "critical" and a "symptomatic" parotiditis, is a mistake.

4. Dr. B. urges the use of atropia in insolation, on the ground that it is "the most general excitant of the vital nervous centres available;" he claims advantage for it hypodermically, because it is available irrespective of gastric conditions—by this means the danger of non-absorption is avoided; and he claims that "like other stimuli, it is indicated in by far the greater proportion of sunstroke cases," while "it is permissible in many cases not amenable to other excitants." It is a cardiac stimulant, and at the same time by its vaso-motor stimulation leads to contraction of any over-distended vessels of the brain, therein avoiding a danger many other stimuli are liable to, of increasing any cerebral congestion.

The doctor reports two cases wherein this treatment was used that fairly seem to vindicate his theory. His doses were from 1-60 to 1-40 gr. The treatment deserves trial.

5. Dr. Crawford reports four series, of ten cases each, of typhoid fever. The first series was treated with alteratives, turpentine, egg-nog, diuretics, with leeches, spongings, etc., locally. There were six deaths. In the second series the treatment was stimulants, nutritious diet, and Dover powder. Three deaths resulted. In the third group the treatment consisted in alteratives, anodynes, stimulants, nutritious diet, strychnia, nitric acid, turpentine emulsion and diuretics. Two cases were fatal. None of the treatment in any of the preceding cases having had the slightest effect in lessening the "dead epithelium" on the "surface of the digestive tube," the fourth group of cases was treated with dilute muriatic acid, beef tea and milk, with recovery in every case. In all these ten cases there was an absence of diarrhœa, suppression

of urine, pneumonic complications, and indeed all other complications. The tongue was cleaned of its coating in an average of fifty-one hours from the commencement of the acid treatment, and with one or two exceptions remained clean during the course of the disease.

He believes quinine aggravates the disease in all cases uncomplicated with malaria. He avers that in two cases where, during the second week of the disease, the tongue was clean and moist, he tried the experiment of giving $\frac{1}{2}$ gr. doses of *quinia sulphas*. The result was that in both cases "a dry and irritable condition of the tongue" was induced within twenty-four hours. He believes muriatic acid is "*the best remedy known*" for typhoid fever.

ARTICLE II.

PROGRESS OF OBSTETRICS.

By E. WARREN SAWYER, M.D.,

LECTURER ON OBSTETRICS, RUSH MEDICAL COLLEGE, CHICAGO.

1. A Case of Immediate Transfusion. By JAMES R. CHADWICK, M.D.
(*Boston Medical and Surgical Journal*, Jan. 14, 1875.)

1. The subject of the transfusion was a middle aged woman, who had suffered a profuse hæmorrhage in her second labor, which took place eleven weeks before her entrance into the hospital. In the meantime hæmorrhages had frequently recurred. Her health was undermined; she had frequent attacks of syncope, and persistent headache; her surface was completely blanched and the blood was greatly impoverished, as elicited from a microscopical comparison with healthy blood.

The usual measures had been invoked for a week in the hospital, despite which she was evidently sinking, and transfusion was employed as a last expedient. A loud souffle was heard with the heart's first sound; pulse 118; temperature 102.8 degrees.

The vein of the patient's arm was made to communicate with the vein of one of the medical gentlemen present, through Aveling's instrument. The operator intended to transfuse six ounces, but being wrongly informed of the capacity of the bulb of his instrument, he was made to transfuse eleven ounces—a mistake to which he attributes the fatal result.

During the operation, the pulse fell from 118 to 104. Immediately afterward there was some retching, but soon the patient expressed herself as better, and free from headache. Shortly after the operation, the patient had a chill which continued for an hour, after which the temperature rose to 104.6 degrees. There was frequent vomiting throughout the day. A troublesome hæmorrhage from the incised vein necessitated, finally, the tying of the vein, after the patient had lost four or five ounces of blood in the bed.

The woman failed gradually, and died on the evening of the same day.

The necropsy revealed some patches of a thin, translucent membrane, containing hæmorrhagic spots, upon the internal surface of the dura mater, marked anæmia of all the organs of the body, except the spleen; also a fatty degeneration in spots on the endocardium and in the substance of the heart. There were no air bubbles or coagula of blood, as a result of the operation, though the entire vascular system was carefully searched for these.

The writer very properly says that the death of this woman was inevitable, though it was probably hastened by the strain to which the heart was subjected by increasing the volume of the circulation.

We would remark that it is further probable that death would have as surely followed if the operator had transfused but six ounces, as he intended, instead of eleven ounces; in fact, it is questionable if the patient's veins retained even six ounces of the quantity transfused, for we are definitely informed that four or five ounces of blood were lost in the patient's bed, after the attempt was made

to arrest the bleeding. Consequently we doubt that the mistake of the operator was an important factor in the cause of death.

Transfusion, of course, will not be resorted to, with any hope of success, in any chronic disease accompanied with marked organic change; on the contrary, there are some diseases that do most positively proscribe this expedient; foremost among them is fatty degeneration of the heart, or arteries. Under these circumstances, or in the course of pulmonary consumption, when the disease has weakened the heart, it is a hazardous thing to increase the volume of the blood; and transfusion, if resorted to at all, should only be done while the impoverished blood of the patient is as rapidly escaping through the opened vein of the opposite arm; an expedient early recommended, and which might have been invoked in this case, could fatty degeneration have been foretold.

There are no means of knowing positively the beginning of fatty degeneration. Dr. Chadwick has alluded to the experiments of Perl, who was able to develop fatty degeneration in the heart of dogs by bleeding them largely a few times. If then, a profuse hæmorrhage is a cause of fatty degeneration, is it not true that transfusion is strongly *contra-indicated in a case of hæmorrhage which occurred some weeks previously?*

The result in this instance detracts nothing from the value of transfusion employed at the moment of hæmorrhage.

In the above case, the supplying of a good quality of blood did not correct the souffle heard over the patient's heart. Considering this, and the fact that fatty degeneration of the heart was found *post mortem*, Dr. Chadwick asks if further investigation will not demonstrate that the souffle, instead of depending upon an impoverished condition of the blood, is really symptomatic of a fatty heart?

It is not our province to examine into this subject; still we cannot accept this connection in most instances of so-called inorganic murmurs, for we have known this

souffle to disappear after a tonic treatment; too soon afterward to allow of the thought that a fatty degeneration of the heart's lining could have been recovered from, if, indeed, this condition is ever ameliorated.

ARTICLE III.

PROGRESS OF SURGERY.

By JNO. E. OWENS, M.D.,

LECTURER ON SURGERY, RUSH MEDICAL COLLEGE, CHICAGO.

1. Practical Indications to be Drawn from the State of the Pupil during Surgical Anæsthesia. By M. P. BUDIN. (*Le Progres Medicale*, Sept. 5, 1874; *The American Journal of the Medical Sciences*, January, 1875.)

2. New Method of Operating on the Larynx. By Dr. A. EYSELL, of Halle. (*Med. Times and Gazette*, Oct. 17, 1874; *The American Journal of the Med. Sciences*, January, 1875.)

3. Extirpation of the Entire Larynx. (*British Med. Journal*, Nov. 28, 1874; *The American Journal of the Med. Sciences*, January, 1875.)

4. Luxation of the Penis. Dr. MOLDENHAUER. (*Berliner Klin Wochenschrift*, No. 45, 1874; *Phil. Times*, Jan. 2, 1875; *The Clinic*, Jan. 9, 1875.)

5. Influence of Oxygen upon the Formation of Pus. By Prof. BINZ. (*Schmidt's Jahrbucher*, Oct. 28, 1874; *The Clinic*, Jan. 9, 1875.)

6. Resection of the Hip in a Child of Twenty-one Months. By Dr. SAYRE. (*N. Y. Med. Journal*, December, 1874; *The Med. News and Library*, January, 1875.)

7. Bacteria. By M. SERVEL. (*Gazette des Hopitaux*, Dec. 8, 1874; *The Clinic*, Jan. 16, 1875.)

1. In his endeavor to discover some sign which might serve as a guide in the administration of chloroform, and which would indicate the state of sensibility during its administration, Dr. Budin has arrived at the following conclusions:

a. There exists in surgical anæsthesia produced by chloroform a constant relation between the state of the pupil and the period of anæsthesia.

b. During the period of excitement the pupil is *dilated*.

c. This period having passed, the pupil contracts; this atresia is well marked, and continues for several minutes, accompanied with complete general anæsthesia.

d. The *dilatation* of the pupil coming on during an operation indicates, in general, either that the anæsthesia is less profound, or that the return of sensibility is approaching.

e. The state of the pupil, then, may serve as a guide in the administration of chloroform.

f. During operations which last a long time, if it be wished that the patient should be insensible and motionless, the anæsthesia should be so managed that the pupils continue constantly contracted.

g. Finally, *vomiting* may produce dilatation of the pupils, cause the insensibility to disappear, and the patient to awake; it annuls, in part, the effects of the anæsthesia.

2. An account of a new method of conducting operations on the larynx appeared in the *Centrablatt für Chirurgie*, for Aug. 15th. Every one, says the author, who employs the laryngoscope must be aware how difficult it is to reach a tumor growing in the lower part of the larynx, which is not sufficiently movable to be driven above the level of the vocal cords by forced expiration. The following is Dr. Eysell's method: Whilst observing the larynx by means of the laryngoscope, for which he employs either daylight or the electric light, an exceedingly elastic needle is passed through the skin and cricothyroid membrane, into the larynx, exactly in the middle line, and immediately beneath the thyroid cartilage. The needle is then made to transfix the tumor, and by depressing its handle the latter is forced up into the ventricle of the larynx. No local mischief has followed even frequently repeated operations. If it be intended to cauterize or tear away the tumor, the patient is directed to hold either the mirror, or, better still, the needle. In this

way Dr. Eysell has succeeded in removing two fibromas from the lower part of the laryngeal cavity. The needle is rendered more pliable by subjecting it to heat.

In a case where the vocal cords were adherent to one another for their anterior two-thirds, the result of a suicidal cut throat, which caused considerable shortness of breath on slight exertion, a narrow tenotome (0.5 centimetre broad) was passed through the scar into the larynx. When the point appeared behind the triangular adhesion, the handle was firmly depressed, and by drawing the knife downwards the cords were separated almost to their origin.

3. Prof. Billroth, of Vienna, performed the operation for the second time on Nov. 11th. The patient, a man aged fifty, suffered from epithelioma, which made rapid progress, the whole of the interior of the larynx becoming affected, and the dyspnoea constantly increasing. A favorable prognosis was given, with regard to the return of the disease, on the ground that no infiltration of the neighboring lymphatic glands could be detected. The patient died on the night of the 16th, apparently from pneumonia.

4. In the case described, the penis was torn completely from its enveloping skin, thrust beneath the coverings of the abdomen and there imbedded in the fat and connective tissue. The organ was discovered by incision in its abnormal position eighteen days after the occurrence of the accident. The urethra was said to be uninjured; the penis had formed adhesions to the abdominal muscles; a catheter could be passed from the meatus to the symphysis, where its further progress was arrested. The glands and prepuce were dissected off, but, at the request of the patient, who stated that he only wished the penis for the function of urination, no further attempt was made to restore the organ to its normal condition. That which had been regarded at the time of the injury

as the crushed and bruised penis was composed only of the cutaneous envelop of that organ, the deeper portions of which had been dislocated as described. The wound finally healed, the penis up to the glans being adherent to the muscular structure of the part and covered with skin. The glans having been left bare and movable, urination was accomplished without trouble. The patient was a strongly-built farmer, aged fifty-seven. Having fallen from his wagon, the horse forced him against a tree, and the wheel of the wagon passed close in front of his body, causing the injury above described.

5. Prof. Binz considers the migration of white blood corpuscles as closely connected with the presence of oxygen. During the repetition of Cohnheim's experiments with the mesentery of hogs, he observed that at the time of the formation of pus, the smallest vessels are only filled with plasma and white corpuscles, which are subject to at least as great blood-pressure as in the neighboring vessels; as soon as the red corpuscles find their way here, the well-known movements begin. As the white cells are either formed anew by the irritation of the wound, or are forced into the circulation and seen to cling to the walls, they receive the first stimulus of the oxygen brought by the red corpuscles, and commence the amoeboid movements.

6. The child had been attacked with double pneumonia, and, shortly after recovering from it, fell on its left side, with the limb abducted. Some weeks later, an inflamed gland was discovered in the inguinal region, which was followed by an abscess. The abscess was opened and allowed to discharge. The limb was cedematous when seen by Dr. Sayre, who extended the incision and found erosion of the end of the femur. At the end of a week the head of the femur was removed, the anterior opened, closed, and a more dependent one substituted. The little patient did well, though it had never received any nourishment except from its mother's breast.

7. M. Balard presented to the Academie des Sciences, Paris, in the name of M. Servel, a communication on the generation and evolution of bacteria in organic tissues protected from contact with the air. The author was induced to make his experiments after having noticed that solutions of chromic acid hardened only the outside of thick anatomical specimens, without preserving the central portions from decomposition.

Thus prompted, M. Servel prepared a one per cent. solution of chromic acid, into which he plunged two living têtes de cobayes which he had just decapitated. After six days of immersion the external coverings of the head were preserved ; but the brain and central portions were evidently in a state of corruption. Examined with the microscope, the cerebral pulp presented a great number of bacteria of all sizes.

These experiments might furnish subject for criticism on account of the possible presence of germs in the nasal and buccal cavities. For this reason M. Servel experimented under different conditions. This time he operated on the liver and kidney of dogs which he killed by femoral hemorrhage. After placing a ligature upon the hilus of the liver and kidney these organs were removed, their fibrous envelopes being respected throughout, and placed in a solution of chromic acid. After five days of immersion the surface of the organs was hardened, but the central portions were putrefied and filled with bacteria.

"These results," says the author, "prove two principal facts :"

"1. That the demonstration, by M. M. Bechamp and Estor, of the generation and evolution of bacteria in organic tissues protected from the air, is entirely correct."

"2. That the effect of conservative agents is the death of microzymas or surviving molecular elements of organs."

Reports of Societies.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, Jan. 11, 1875.

(Reported by RALPH E. STARKWEATHER, M.D.)

TUMOR OF DENTINE.

Dr. John Bartlett, President, in the chair.

Dr. Andrews reported a case of unusual interest and rarity, and accompanied the same with an exhibition of a microscopical preparation of a portion of the material removed, furnished him by Dr. Curtis.

A writer in the recent edition of Holmes' Surgery cites and knows only of twelve cases of tumor of dentine. The European medical museums have a total of six specimens only. Dr. Andrews had heard of but one case in this city similar to his.

Dental tumors are of two sorts. The first is a simple deformity of the tooth, its structure not being changed. The second sort is where the teeth depart from the normal structure altogether; generally the molar teeth are the ones thus affected and deformed.

The patient, a lady of eighteen years of age, exhibited a swelling on the side of the jaw, where the wisdom tooth should have presented itself, very much as though the projecting bony tumor had been due to a simple bony periostitis. A few months after having first seen the patient, the tumor or cyst began to suppurate, and it was at once incised. Upon probing, something like dead bone was felt, and the prominent point of the bone tumor had ulcerated through the gum. The patient having been anæsthetized, a longitudinal incision was made along the gum, and ineffectual attempts made to extract a supposed tooth. At length, by using a pair of strong gouged bone forceps, a fragment was broken off.

In this manner, most of the then projecting bony tumor was removed, and carbolated lotions ordered. Eight weeks later, there had been a slight loosening of the mass, and a little elevation thereof, and under anæsthesia, by using the bone forceps, a rounded tuberos bony body was removed from the cavity where a tooth should have been.

SARCOMA AND CARCINOMA.

Dr. Andrews made some remarks as to the clinical history of the sarcoma and carcinoma, their differential diagnosis, microscopical and physical, illustrating the same by reports of cases, and by microscopical specimens, prepared and furnished by Dr. Curtis, of carcinoma of the breast.

The patient with carcinoma mammæ has died as had been anticipated, the clinical history confirming the diagnosis and prognosis made by the microscopist.

The patient with sarcoma, the second case, is now alive after two years presence of the tumor, or its fungus, which is now of the size of a large hazel-nut, and is located on the side of the foot near the malleolus.

Prof. Atlee's treatment had been followed, that of the exhibition of Fowler's solution, and with gratifying results.

Incidentally, Dr. Andrews remarked that it seemed to him that there were more cases of cancerous growths in Northern Wisconsin than in regions south of us. That consumption and cancer often prevailed in the same climates, and were more abundant the nearer one approaches to the Eastern coast of this country.

Histology of Carcinoma. First, there is a fibrous frame-work, in which are impacted a quantity of small round cells as follows: bands of fibres interlace and leave lacunæ, and these are packed full of rounded cells. Certain growths or germs are transmitted to the lymphatics—these become cells and are conveyed internally; probably these spaces, or lacunæ, in which the small cells are packed, are enlargements of the

lymphatics—hence open right into the absorbents, convert the lymph gland itself into cancer. A characteristic of these cells in carcinoma is that they can easily be brushed out, leaving the cavities, or lacunæ, empty. They can thus be easily conveyed through the body.

There is a certain class of tumors hard to destroy ; among them the sarcoma, or flesh tumor. A few weeks ago, a woman, eighteen years of age, presented herself for treatment, upon whom there were several of these growths. They had been enlarging and increasing for upwards of two years. A year ago, two had been removed but both returned, and one became larger than it had previously been. The tumors were from the size of a hazle-nut to two inches in diameter, hard, not painful ; the neighboring lymphatic glands were normal in every respect. There were two on the right thigh, but the inguinal glands were sound. There was one tumor in the left inguinal region of the abdomen, and suppurating. In every case the lymphatic glands were perfectly normal—for sarcoma does not develop in the lymphatic spaces. Its cells are outside of them—hence are not taken into the absorbents. The cells of the sarcoma adhere more closely to each other than do those of carcinoma : they are spindle shaped, or more like a fibroid tumor, so that it is sometimes hard to distinguish between sarcoma and fibroid tumors. The sarcoma, unlike the carcinoma, has no framework apart from the cells. As a general rule, a diagnosis can be made between carcinoma and sarcoma. The hope of cure by excision is greater in the latter than the former.

Dr. Hyde thought it a difficult point as to whether a fungus hæmatoides—a medullary sarcoma—might not be considered cancerous.

It was somewhat remarkable that in a recent discussion on cancer, in New York, Dr. Willard Parker had said that cancer was no longer to be considered as hereditary, that it often occurred in families with no previous history of cancer.

Dr. Curtis thought that there was a difference between sarcoma and carcinoma ; the former throughout is made up of similar tissue : the latter is made up of entirely different elements. The colloid material is a degeneration of cancerous material, just as cancer may undergo fatty degeneration ; the colloid is a transformation ; it is an exaggerated species of cancer, the cells greatly dilated. In cancer there is no shading off of the cells into the fibrous tissue. The term cancer, like that of consumption, has been abandoned by some authors ; it is too general an expression.

After further discussion by Doctors Simon, Hyde, Merriam, and Andrews, the Society adjourned.

Selections.

THE MEDICAL YEAR 1874.

[From the London Lancet.]

Medicine is not only a year older since our last summary, but a year wiser and a year more effective in its knowledge of disease and of methods for controlling it.

In Physiology, one of the principal works that have been published since the close of the last year, is Dr. Klein's memoir on the Lymphatic System, in which the distribution of the lymphatics, as well as the arrangement of the epithelium on the serous membranes, is very fully considered ; the general result arrived at being that the serous membranes are to be regarded as unraveled lymphatic glands, and, as such, play an important part in the formation of the white corpuscles of the blood. Drs. Foster and Balfour have just published a work that has long been needed—"The Elements of Embryology"—in which the process of development is described, in a singularly lucid and intelligible manner, from the earliest period in the fowl, and which constitutes the first part of a larger work, on the same subject, embracing the history of development in other animals. Dr. B. has also done

a good piece of work in following the development of the dog-fish and its allies.

Mr. Parker has continued his elaborate account of the development of the skull, in his lectures delivered at the Royal College of Surgeons. Arnold, Gasser, Rauber, Mihalkovics, Sernoff, von Torok, Merkel, and many others, have devoted themselves to the elucidation of the process of development of various special parts or organs, as the eye, ear, pituitary body, testis, etc. Mr. St. George Mivart has published a brief but useful account of the Anatomy of the Frog. Quite recently, Mr. Barker has published a valuable translation of Frey's Histology. A very interesting little work has been issued in the International Scientific Series, by M. Marey, on "Animal Mechanism and Aerial Locomotion," in which great ingenuity is displayed in the application of recording apparatus to the registration of the movements of animals, both in aerial and in terrestrial locomotion. To the same series Dr. Draper, of New York, has contributed a volume that will be read with interest, on the "History of the Conflict between Religion and Science," in which the learned author, who is well known for his excellent treatise on Human Physiology, has endeavored to present a clear and impartial statement of the views and acts of the two contending parties. There is also a third, consisting of a translation of Oscar Schmidt's doctrine of descent and Darwinism. A popular physiology is contained in "Hinton's Physiology for Practical Use." A complete account of the Physiology of Food and Dietetics has been written by Dr. Pavy. Dr. Carpenter has developed two or three chapters on Mental Physiology contained in the earlier editions of his Physiology, which have been excluded from the later ones for want of space, into a goodly volume, written with his usual clearness and intelligence.

Amongst foreign works may be mentioned the "History of Creation" and the "Development of Man," by Haeckel, the former of which has been translated into English by Lankester, and the latter into French. Herrman has published a fifth edition of his excellent work on Physiology, which is now, we believe, in course of translation into English. Dr. Gustav Le Bon, in a large volume entitled "*La Vie*," remarkably well illustrated, and M. Coyteux, in another, the "*Études sur la Physiologie*," have both treated fully of human physiology. Hitzig has collected his observations and inquiries into

the functions of the brain into one volume, which is worthy of careful perusal. Though, perhaps, scarcely capable of being included under the head of Anatomy and Physiology, we must not omit to chronicle the first International Congress of Orientalists, which was held at the Royal Institution in London, in September, and which under the presidentship of Dr. Birch, was the occasion of several excellent addresses, amongst which those of Max Muller, the President, and Prof. Owen, deserve special mention. Prof. Rutherford has been appointed to the Edinburgh Chair of Physiology, and carries with him the good wishes of his late colleagues in King's College, and of his friends in London. We trust that still increasing numbers of students in attendance upon his classes will testify to the ability with which he conducts them. A large number of separate contributions have been made up by individual observers, amongst which it is difficult to select any of pre-eminent value. Braun has repeated Hitzig's experiments on the excitability of the surface of the cerebrum by weak electrical currents, and whilst generally confirming his experiments, and those of Ferrier, adds this novel point, that there are several cases in which there appear to be two centres on the surface of the hemispheres for the same set of muscles, as, for instance, those of the neck. He also finds that, after shaving off the gray matter from a given spot, the groups of muscles can be made to contract, if the current be applied to the cut surface of the white substance as before, showing that the nerve-fibres really arise from the gray matter, whilst, if the white substance be divided, all manifestation of nervous excitation ceases. Burdon Sanderson has also made experiments upon this point, and has shown that there are points in the corpus striatum of the same side which correspond to those of the same hemisphere. Dr. Ferrier considers that in Dr. Sanderson's experiments only a medullary corresponding to the cortical centre is removed. Nothnagel, from experiments on the thalami optici, has come to the conclusion that they have no relation to voluntary muscular movements, nor to the general sensibility of the skin, but that they are immediately connected with the muscular sense. It is pleasant and encouraging, in connection with the subject of Physiology, to call to mind the meeting of the Russian Association for the Advancement of the Natural Sciences, held at Kasan, a flourishing city in the very centre of European Russia, on the Volga, which pos-

sesses a good university. Physiological subjects figured largely in the discussions. We may mention especially Dr. A. Schakowsky's paper on the Amount of Fat in Human Milk, averaging 3 per cent., and [the striking reduction in the amount produced by a strictly vegetable diet, till it fell to 0.8 per cent. ; Prof. Kowalewsky's paper on the Mechanics of the Movements of the Bile ; and the paper of Dr. A. Troitzky, of Kasan, on a method of estimating the rapidity with which a stimulus is propagated under different temperatures, and with various strength of exciting currents. The maximum rapidity of propagation of stimulus is between 68° and 50° F.

The experience of the year has shown that Esmarch's plan of preventing hæmorrhage is capable of general application with advantage, and it has been almost universally adopted. Dittel's elastic ligature for the treatment of fistula in ano has been lately highly praised by Mr. Allingham, who has treated a number of cases with it satisfactorily. An interesting correspondence took place in our columns in January as to the credit of priority in the use of the elastic bandage and of the elastic ligature. According to our correspondent, Dr. Gesualdo Clementi, of Naples, Dr. Grandesso Silvestri, of Vicenza, used the elastic ligature in 1862 ; and he and Professor Vanzetti, of Padua, together used and described the elastic bandage very much in the same way as Esmarch. The subject of bloodless surgery, by means of the galvanic cautery, has been discussed at length by Dr. Bryant, and the introduction of a new and constant battery with carbon and bichromate of potash for its elements, seems to remove one of the difficulties hitherto in the way of the general adoption of the plan. In connection with the subject of Pyæmia, we may refer to Mr. Lister's practice, as reported upon by Mr. Gamgee, which serves to illustrate the proverbially diverse effect produced by the same series of phenomena in different minds. The treatment of Syphilis was the subject of an address to the Hunterian Society by Mr. Jonathan Hutchinson, who proved, we imagine, to the satisfaction of all candid inquirers, that mercury is the remedy for that loathsome disorder. The subcutaneous injection of mercury was the subject of an interesting communication by Mr. Cullingworth, but the method is one which has hitherto found little favor in this country. Sir William Fergusson has introduced a modification of the method of operating on cleft hard palate, which seems to promise well ; and the same eminent surgeon was able

to relieve public and private anxiety as to the identity of Livingstone's remains by the recognition of the united fracture of the humerus. Mr. Teale has called attention to the operation of ovariectomy in exceptional cases; Mr. John Wood has contributed to the literature of thoracentesis, and Mr. Reginald Harrison to that of puncture of the bladder by the aspirator. The recent lecture on American Surgery by Mr. Erichsen has set before us many points of interest in connection with the surgery and hospitals of the United States; and Dr. Buchanan's introductory address served to illustrate the activity of our northern brethren. Amongst the feats of surgery for the year, we may mention Billroth's total extirpation of the larynx and epiglottis for carcinoma—the second operation of the kind which he has performed; also his second complete removal of the thyroid gland, and the extirpation of a fibro-cystic tumor of the uterus, weighing sixteen pounds, with the uterus and its appendages, followed by recovery, by Dr. E. H. Trenholme, of Montreal. The "*Lancet*" of July 25th, sets forth that Dr. Henry Harland, of Wadhurst, Sussex, had extricated a Waterloo bullet from the hand of James Jenner, aged eighty-three. The said bullet had been in the veteran's hand fifty-nine years, and had become inconvenient to him at his work as a gardener! Our pages have contained many illustrations of the happy use of the aspirator in tapping the pericardium and other cavities, and Dr. Maclean speaks of the pus let out of livers at Netley by this instrument in a summer as measuring hundreds of ounces.

Of papers of importance at the Medico-Chirurgical Society, those by Dr. Cunningham on Recent Experience of Cholera in India, and by Surgeon A. Hall on the use of Chloral subcutaneously injected in that disease; by Mr. Mahomed on the Prealbuminuric Stage of Bright's Disease; by Dr. George Johnson on the Laryngeal Symptoms produced by Pressure on the Vagus and Recurrent Nerves,—may be noted. Much valuable matter has been brought forward at the Medical Society, which shows no signs of decay; and we must not omit to mention the able Lettsomian lectures delivered before the Society by Dr. Broadbent, on the subject of Syphilitic Affections of the Nervous System. The most important papers at the Obstetrical Society have been those of Puerperal Thrombosis, by Dr. Playfair, and on the Relation of Flexion and Congestion of the Uterus, by Dr. John Williams. We may note also a discussion at a special meeting on

the admission of ladies as members of the society, which resulted in a decision adverse to the proposal.

The summer months brought the usual pleasant gatherings of scientific societies, in which not a few of our brethren seem to find their holiday. The meeting of the British Medical Association at Norwich was large and successful. The addresses were of a high character, and the Society of the old city was full of worth and hospitality. Amongst the distinguished foreigners was M. Magnan, who assayed to illustrate on dogs the different action of alcohol and absinthe, and in so doing involved some of the spectators in a criminal prosecution, at the instigation of the Society for the Prevention of Cruelty to Animals.

The meeting of the British Association at Belfast was presided over by Professor Tyndall, who lauded matter in such terms as to offend the sensitive religious minds of the Irish. He indicated that he saw in matter promise and the potency of all things. It is only fair to add that he has since confessed that when he looks abroad on the beauty of the universe, he cannot resist the feeling that there must be some Being superior to it and more familiar with it than he himself. And so we think, We have great regard for Professor Tyndall and his colleagues of the British Association; but we trust that there is a Being somewhere in the wide universe to whom even the knowledge of our wisest *savans* appears very elementary. Professor Huxley's address in Physiology on the Hypothesis that Animals are Automata, and Dr. Hooker's on the Carnivorous Habits of Plants, Professor Redfren's paper on the Effects of Ozone on the Animal Economy, Professor Cleland's on the Morphology of the Brain and the Function of Hearing, Sir Duncan Gibb's case of an old woman of 111, and other communications, are full of scientific or human interest. The Social Science Congress met in Glasgow. One of the best features of the meeting was a very able address from the chair of the Public Health section by Dr. Lyon Playfair. During the sitting of the British Association, congratulation and friendly sentiments were exchanged with the French Association for the Advancement of Science which met at Lille. The Medical section of the French meeting was well attended, and the scientific work of it was good. The Public Analysts are now becoming an important power in the community. They held a meeting at Cannon-Street Hotel, on Friday, August 7th, and in several resolutions showed their mind on questions involved in the working of the Adulteration Act.

The General Medical Council had a long and important sitting in the very hot days of July, from the 9th to the 18th. The business was opened by a very perfect address from Dr. Paget, the retiring President. In the pith of the report of the visitors there is claimed a terrible defect in preliminary education.

Several cases of rheumatic fever have been published, in which almost every conceivable remedy has been given with varying success. The acid treatment and the alkaline treatment, quinine, iron, and propylamin, have all been shown to be valuable, or at least not hurtful, in some cases of acute articular rheumatism. The value, in epilepsy, of bromide of potassium in large doses frequently repeated, was illustrated in a patient under the care of Dr. Ransome, of the Nottingham General Hospital. From Charing-cross Hospital we published a case showing the value of chloroform in chorea, and from the Royal United Hospital, Bath, another showing the value of chloral hydrate in the same affection. Lastly, we lately recorded a case from the University College Hospital, in which a child was shown to have suffered from an acne-like skin eruption, shrewdly traced by Dr. Tilbury Fox to taking milk from its mother, who was under the influence of bromide of potassium.

In Therapeutics, interest still centres to a very large extent in substances which, as a matter of fact, affect the nervous system, such as alcohol, chloral, belladonna, physostigma, phosphorus, etc. The value of alcohol as a therapeutic agent is still a much contested point. But we have lately had to remark on the great care and moderation with which it is prescribed by the present leaders of medical practice. The care with which a spirit ration was served out, and its effects watched, in the Ashantee war, made the subject very interesting. To say the least, the teetotalers sustained in that warfare a creditable amount of health, and in sickness showed a creditable amount of recuperative power. The Gold Coast campaign may be held to have proved, in the words of Dr. Parkes, that the rum ration should not be given in greater quantities than two ounces and a half per man daily, and that the time for giving it is not before or during, but after, a march. We may hope that in the future the spirit ration will be, as it was here, an extra to be given when deemed expedient by those best able to judge of circumstances and the wants of men. That remarkable medicine, physostigma, stands credited, on the

testimony of Dr. Crichton Browne, at the Medical Society of London, with having cured two cases of general paralysis. Supposing there to have been no error of diagnosis, and no misconstruction of the relation of events in these cases, we should say that this is the most remarkable therapeutical achievement recorded in the year—much more remarkable than the several cases of tetanus apparently cured by chloral. The application of the curative powers of this latter medicine become multiplied. Unfortunately the use of the drug as a tipping agent also increases. Several cases of poisoning by it have occurred. Amongst the purposes for which it is recommended, with some show of reason, is as an anæsthetic in labor, and as a remedy, hypodermically injected, in cholera. In two or three cases of exophthalmic goitre, under the care of Dr. R. T. Smith, very great relief and advantage were obtained by the employment of belladonna. The question of the use of the cold bath in typhoid fever has been raised by an amateur therapist in the "Times;" but there has been no important addition to our knowledge of its value. In the serious epidemic of typhoid at Lyons it was used extensively, but with rather injurious results in the production of congestion, etc., and a correspondingly high rate of mortality. The bath used seemed to be at too low a temperature—namely, 68° F., and the use of it was not sufficiently restricted to cases of hyperpyrexia. In November, Dr. Clifford Albott, of Leeds, discussed the mode of death in the early days of scarlatina, and gave proof—first, of the hyperpyrexia as a cause of death; secondly, of the efficiency of cool bathing in averting the tendency to death. The use of ipecacuanha in the form of spray for cases of winter cough and bronchitic asthma is considered by Dr. Ringer.

Dr. Spencer Cobbold has just finished an account of cases illustrative of the treatment of tapeworm, in which he shows at once the Protean effects of this intestinal guest, and the efficacy of discriminate treatment. He evidently revels in the possession of nineteen tapeworm heads from eighteen patients, not only as the guarantee of complete cure, but as a rich accession to his cabinet specimens.

Although the closing year is not likely to be remembered as one in which crime was less in amount than usual, there has, nevertheless, been an absence of crime of a sensational order. Public attention has not been

roused by any villainous or subtle atrocity, and medical jurists have not been called upon to unravel any startling mysteries. The great question of identity involved in the Tichborne trial has been settled, and perhaps we may go so far as to say that the Lord Chief Justice has originated a new principle of identification by his axiom that however closely two persons may resemble each other anatomically, yet "no two persons ever were alike within." Certain it is that his masterly dissection of the inward Orton, and his comparison of it with the inward Tichborne, served to carry conviction, when scars, thumbs, ears, twitchings, brown marks, and peculiarities had merely tended to make confusion worse confounded. One of the most important advances in forensic medicine has been made by Dr. Richardson, of Philadelphia, who, by applying a micrometer and the highest powers of the microscope, has shown that a distinctly recognizable difference exists in the size of the blood-cells of man and the other mammalia.

The science of toxicology is threatened with a severe shock from an unexpected source. The practice of cremation has been strongly advocated, and should it come into vogue there will be, of course, an end to "exhumation by order of the coroner." Civil cases, involving medical questions have not been numerous. Payment of a life policy has been refused on the ground that material information as to the habits of the assured was withheld, and although a verdict was originally obtained for the plaintiff, the insurance company obtained a rule for a new trial. The case of *Simpson vs. Davey* was one of a peculiar and distressing nature, and has roused the sympathy of the whole profession. Dr. Davey has had to pay £500 damages (besides law expenses) because, having unfortunately contracted syphilis at a midwifery case, and having affected with it another patient (Mrs. Simpson), and, further having undertaken to treat Mrs. Simpson free of charge till she was well, he failed to fulfill his contract. We would particularly remind our readers that Dr. Davey has suffered, not on the ground of having infected a patient, but merely on the ordinary ground of non-fulfilment of a contract.

The year will be remarkable in epidemiological annals, first, for the reappearance of plague in no less than three different localities of Asia and Africa; and, next (we may more reasonably hope), for the cessation of the long-continued prevalence of cholera in Europe. Early in the

present year plague broke out in Mesopotamia, on the lower Euphrates; somewhat later it appeared in the Regency of Tripoli, district of Bengazi, North Africa; and still a little later in Western Arabia. The scene of the outbreak in Mesopotamia is memorable in ancient history as being within the confines of Babylonia, not far distant from the ruins of the great city. Here, among the Afij Arabs, who occupy the first of the great marshes which exist on the east bank of the river, and of which a series extends to the junction of the Euphrates with the Tigris, the disease appeared. Spreading from the marshes, it extended along both banks of the river, attacking the different towns and villages as high as Hiliah. Traveling westward, also, it passed the marshes of Hindieh, on the west bank of the river, the scene of the outbreak of plague in 1867, and attacked the two cities, sacred to the Shiite Mahomedans, of Meshed Ali (Nedjef) and Meshed Hussein (Kerbela) on the border of the great Arabian desert. It is estimated that this outbreak carried off 4,000 persons out of a population of 90,000. The outbreak of plague in North Africa was first recognized at Merdj, a village twenty hours distant from Bengazi. It is stated to have appeared first among a Bedouin tribe encamped near the village, then to have extended to the village, and to have subsequently spread among the tribes inhabiting the district. Here the outbreak was preceded by and occurred at a time of famine, and when the country about Merdj had been converted into a vast marsh by a protracted rain. A French physician, Dr. Laval, unfortunately contracted plague in investigating this occurrence, and died from the disease. The outbreak is now reported to have ceased, but the loss of life it has caused is not yet known. The district of Bengazi was affected with plague in 1851. The scene of the outbreak of the plague in Western Arabia is in the mountainous Assyr district, North Yemen. Here, also, it is stated, in a recent report, that the disease is at an end. This outbreak would seem, so far as is yet known, to have been very circumscribed, but of its nature no doubt appears to be entertained. Plague, it is said, had not been known in Yemen since 1816 until this appearance.

The probable cessation of cholera on the Continent relieves Europe from an incubus which has been weighing heavily upon it for ten years. The disease has been uninterruptedly present in Europe ever since its extension from Egypt to the southern coast of the Continent in 1865.

Port Sanitary Authorities are increasing in number and importance, and their influence in checking the importation and perpetuation of epidemic diseases is being acknowledged and appreciated. The systematic inspection of vessels immediately after arrival, the removal and isolation of the sick, the examination of the drinking water, the closet accommodation and state of bilges, the disinfection of the clothing, the inspection of foul cargoes, and other miscellaneous duties, are found to be within the scope of work of a port medical officer. At the beginning of the current month a large body of Russian and German emigrants imported small-pox into the Thames, and, although the sick and suspected were at once separated from the healthy, the latter proved to be infected, and took the disease to Liverpool, where, however, it was successfully circumvented by the local authorities. The half-yearly reports issued by the Corporation of London, as sanitary authority of the port, show the large amount of sanitary work that has to be done on this as on other rivers. Scurvy has exhibited a slight tendency to increase in our mercantile marine. Seven official inquiries have been held by the medical officer of the Board of Trade during the year on account of outbreaks of this disease; and in one of these the master of the ship was prosecuted and fined for non-compliance with the sanitary clauses of the Merchant Shipping Act. Some progress has been made in the ventilation of ships of all classes; and much attention has been directed to this important subject, chiefly with reference to ironclads and to school ships.

The Sanitary Commission during the year has issued twenty-one reports—viz., four on the causes of certain outbreaks of fever, six on the drainage and general sanitary condition of important towns and districts, and eleven on sanitary matters of general interest, such as inquiries into the condition of the dwellings of the poor, and the influence of chemical manufactures on health, etc. The outbreak of typhoid fever at Cambridge was the subject of our first report. The disease appeared late in the autumn of last year, and, after slowly making its way along a certain line of drainage, culminated in a severe outbreak in the new buildings of Cains College. We attributed the spread of the disease to the abominable condition of the town drains, and to the percolation of sewage matter into the wells; and suggested that the cause of the outbreak at Cains College would be found in some defect in

the main drain, by which contaminated excretory matter or sewer gas had found access to the College buildings. Dr. Buchanan some weeks later found that a portion of fæcal matter had been sucked up from this drain, and had contaminated the water supply of that part of the College where the cases occurred. Our inquiry into the health and management of the children at the Brentford Union Work-house, led us to the conclusion that the state of our work-houses is rapidly reverting to the status quo ante bellum 1866, and served to increase a growing feeling in favor of boarding out pauper children. The new drainage works at Brighton were the subject of a lengthy report.

Although we have no such important contribution to chronicle this year as that of Surgeon Lewis' very remarkable discovery of the presence of filaria circulating in the human blood, the members of the Indian and British medical services have contributed their quota to the scientific work of the year. The Ninth Annual Report of the Sanitary Commissioner with the Government of India contains a remarkable paper, illustrated by some fifty-nine colored drawings, on the floating bodies in the air of that country, by Dr. D. D. Cunningham, of the Indian Medical Service, who has been employed under Government, in conjunction with Dr. Lewis, of the British army, in the investigation of cholera in India. Dr. Cunningham has also, in addition, made many miscellaneous æroscopic observations in connection with the presence, development, and influence of bacteroid and other bodies found in the air of certain localities, and in that of sewers, from which he draws many interesting conclusions, one of which is that no connection can be traced between the number of bacteria, spores, etc., present in the air, and the occurrence of disease, nor between the presence or abundance of any special form or forms of cells, and the prevalence of diarrhœa, dysentery, cholera, ague, etc. Dr. Vandyke Carter has prosecuted and published his researches into the affection known as mycetoma, or fungus-disease of India. A Commission composed of the medical authorities at Calcutta have instituted an exhaustive series of experiments into the nature and effects of Indian snake-poison, as compared with that of Australian snakes—the Australian tiger-snake, for example,—which have established the correctness of the results previously arrived at by Dr. Fayrer, and proved the inefficacy of the ammonia treatment of snake-bite.

The Ashantee war gave several naval medical officers opportunities of distinguishing themselves, and these received their rewards in early and well-deserved promotion.

In surgery we have to note the issue of a third edition of Dr. Pirrie's book, and a work embodying the observations and lectures of Mr. Cæsar Hawkins. We must not omit to mention with satisfaction the papers in the "*Lancet*" on Hospital Construction, by Dr. Sutherland and Captain Douglas Galton. Our tribute to the merit of Dr. Barne's work on the Clinical History of the Medical and Surgical Diseases of Women has been fully endorsed by the Profession. A new edition of Meigs' and Pepper's Diseases of Children, and Dr. West's well-known work on the same subject, deserve a passing word. We reviewed at much length a number of works on the Anatomy and Diseases of the Ear, by Politzer, Hinton, Turnbull, Allen, and others. A new edition of Dunglison's Dictionary of Medical Science, large and valuable as it undoubtedly is, would still be benefited by careful revision. In Mental Physiology, Dr. Carpenter's "*Principles*" deserves to be named as an important contribution to that subject. In Sanitary Science and Army Hygiene, we have had many works in connection with the late Franco-Prussian war, Lex's and Roth's contributions, and Dr. Guy's Lectures on the Sanitary Aspects of War. Pettigrew on Animal Locomotion has excited some controversy.

The Hospital Sunday movement grows and extends everywhere. In London, auspiciously begun in 1873, it expanded in the present year, both as regards the sum raised and the number of contributing congregations.

The roll-call reveals many gaps in the professional ranks. Early in the year, Mr. Wormald, senior member of St. Bartholomew's surgical staff, died at a ripe age; and Mr. Thompson Dickson closed prematurely a promising career at Guy's. Dr. Forbes Winslow had not quite survived his vigorous and devoted energies in medicopsychology when he too was summoned to "the majority." Medical physics owes much to Dr. Neil Arnott, medical diagnosis to Dr. A. Kilgour, and the limitation of criminal responsibility in courts of law to Dr. Winslow. The Bombay army boasts of few abler medical officers than Dr. John Maclellan, who discharged with equal promptitude and effect duties apparently diametrically opposed; but a yet severer loss than his was that of

Cruveilhier, the great anatomist, physiologist and surgeon, a worthy disciple of Dupuytren, and long one of the brightest ornaments of the great Parisian school. "Literary labor," says his compatriot and eulogist, M. Bardinet (himself just numbered with the dead), "hospital practice, patients at home and abroad, faculty engagements, lecturing, and so on, absorbed eighteen or nineteen of the twenty-four hours, and this herculean work was carried on for many years. Rarely has a man of science been so thoroughly kind and considerate to his patients; rarely have the latter more warmly reciprocated a welcome so sympathizing." Truly "his works do follow him," for few anatomists of the century continue to fill a greater or more honored place on the book-shelves of the learned. About the same time, England—and, indeed, the whole civilized world—began reluctantly to persuade themselves that the mightiest missionary explorer since Las Casas or Xavier had died in David Livingstone—died indomitable to the last, after a life which more than any other, realized Arnauld's noble rejoinder when entreated to rest—"Rest! we shall rest through eternity!" The arrival of his mortal part on our shores enabled Sir William Fergusson to identify it by the recognition of the false joint which Livingstone had asked Sir William to examine in London some seventeen years before. The honor of a tomb in England's Walhalla, Westminster Abbey, was accorded to him; but his monument—

"ære perennius
Regalique situ Pyramidum altius,"—

will be that disenshrouded Africa with its slavery suppressed and its moral and religious darkness replaced by Christian science.

Dr. Anstie's death was the cause to us of almost domestic grief, and threw our pages, which he had so much enriched, into mourning. We need not recount again his virtues,—

"Since Heaven, what praise we offer to his name,
Hath rendered too authentic by its choice."

We must here leave our attempt to exhaust the history of medical labor. We can only, as busy men, snatch fragments from the accumulating pile of the stately building of medical science and art. We should especially like to have attempted to do some justice to our foreign brethren, and to our American—we were going to

say—fellow-countrymen ; but we will content ourselves by referring to our constant attempt to represent in our columns the points of all their scientific and practical work. Witness the Foreign Gleanings, the letters of our Paris Correspondent, and our frequent leaders on physiological or pathological questions. As regards our American friends, what English surgeon did not feel proud as he read Mr. Erichsen's address, winding up with that accomplishment of Dr. Sayre, the removal of the head of the femur fifty-two times, bearing the same relation to Mr. Syme's excision of the elbow that the Reform Bill of 1867 bore to that of 1832. Medicine is becoming more and more an affair of public interest. "Internationalism" has no dread to suggest when it represents the discussion of sanitary questions at Vienna or physiological questions at Kasan. Be it ours in the future not only to hold high the domestic and social interests of the Profession, but also to recognize medical labors everywhere, whether applied to minute and impalpable questions in pathology, or to those great questions which affect the health and happiness of communities.

Editors' Book Table.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

MATERIA MEDICA, FOR THE USE OF STUDENTS. By *John B. Biddle*, Professor of Materia Medica and General Therapeutics in the Jefferson Medical College, etc., etc. Sixth Edition, revised and enlarged, with Illustrations. Philadelphia: Lindsay & Blakiston. 1874. \$4.00.

In this modest little volume of four hundred pages we have the best compendium of Materia Medica in the language, whether considered with reference to comprehension or to its method. The subject matter comprises all that is necessary for the student to acquire, and very much more than one in a thousand practitioners ever

learns, while its arrangement is systematic, concise and simple.

THE OUTLINES OF THE SCIENCE AND PRACTICE OF MEDICINE.
By *William Aitken, M.D., F.R.S.*, Professor of Pathology,
in the Army Medical School, etc., etc., London: Chas.
Griffin & Co., 10 Stationers' Hall Court. Philadelphia:
J. B. Lippencott & Co. 1874. \$5.00.

The medical student of the present is peculiarly fortunate in the greatly increased facilities for the acquisition of professional knowledge which he enjoys, as compared to those of his predecessor of a few years ago. Amongst the many books "designed for the use of students," it would be hard to find one as comprehensive and unobjectionable as this. It is not a "Compendium" or a "Vade Mecum," and differs essentially from the whole of that class, but is really what it pretends to be, "The Outlines of the Science and Practice of Medicine," containing what is essential for the student to know, and omitting much that is superfluous.

We will, however, venture to object to the propositions contained in the first chapter, *i. e.*, that on "preliminary definitions and explanations," viz: "Health implies that state or condition in which a person exists, being fully able, without suffering, to perform all the duties and functions of life, possessing the normal activity of all the component parts of the body. Thus many degrees of health are possible, from the possession of a feeble existence to the most robust constitution." The author desires, doubtless, to express the fact that many degrees of vigor are compatible with the idea of health in different individuals, although his mode of expression is somewhat paradoxical, for it is difficult to imagine one "possessing but a feeble existence," and yet "performing all the functions and duties of life," unless very imperfectly.

The next proposition, *i. e.*, "The phenomena of disease are the *normal* vital manifestations of the body under the influence of some unusual, hurtful or dangerous condition,

which is known as the 'morbific cause,' " appears to involve a verbal contradiction. "Normal vital manifestations," under the operation of "morbific causes," must have already lost their *normal* and assumed an abnormal character in order to appear as "phenomena of disease."

The next proposition in its first term is too exclusive, *i. e.*, "Disease is therefore some deviation from this normal activity of function;" and does not comprehend even the simplest manifestations of disease. The next term suggests as a possible, a necessary condition, *i. e.*, "If the deviation from the normal activity of function be accompanied by appreciable alteration of structure, the disease is then said to be structural or organic,"—and is moreover indeterminate in its phraseology, as the word "appreciable" is purely relative, and may refer to every degree of perception, from the unaided observation of a tyro to the trained eye of the expert microscopist with his 1-50 inch objectives.

The third term of this proposition involves a conclusion which seems utterly unwarranted by observation of fact, or by analogy, *i. e.*, "If there be no appreciable change of structure, the disease is said to be functional." No objection can be made to the form of the argument, but to the premises which involve a *petitio principii*. "Functional disease" has a strange old fashioned sound at this day, when Beale and Frey and Richardson are demonstrating daily the precedence of structural over functional derangements, and illustrating with their high power lenses, what was already so clear to the logical mind, that function presupposed structure, and could not be manifested either in its normal or its morbid phases, without corresponding *pre-existing* structural conditions.

True scientific progress is always from the complex to the simple, from the accumulated data to the general principle underlying them, in view of which we have endeavored to indicate what we consider a defect in a book so full of merit and value, which could not fail to impair its usefulness to the student by the inculcation of principles

which scientific progress has long since shown to be only acceptable while awaiting the light that has long since dawned upon us. H.

FREE PHOSPHORUS IN MEDICINE, WITH SPECIAL REFERENCE TO ITS USE IN NEURALGIA: A Contribution to Materia Medica and Therapeutics. By *J. Ashburton Thompson*, Surgeon at King's Cross to the Great Northern Railway Company, Surgeon Accoucheur to the Royal Maternity Charity. London: H. K. Lewis, 136 Gower Street, W. C. 1874.

This work is modestly announced by the author in his preface as "Notes," "not so much constituting an original work, as containing a resume of what is known of the use of phosphorus in medicine, written in the light of considerable clinical experience."

It comprises the history, pharmaceutical preparation, dose, internal administration, therapeutic uses, cases of poisoning, and biography.

The first chapter is purely historical, and of interest only in that regard. The second chapter, relating to the pharmaceutical preparations of the drug, has a practical interest. The solutions of phosphorus in the various oils are discussed in detail, and do not receive the author's approbation, in view of the chemical reactions established, through which "the activity of the dissolved element" may be "seriously altered, impaired or destroyed." Of these oily solutions he gives the preference, as would be expected, to that in cod liver oil.

Regarding the solutions in ethers, alcohol and the hydro-carbons, the exercise of extreme care is enjoined to secure an absolutely anhydrous condition in the solvent, as "the presence of a single drop of water is sufficient to throw down some of the element in its hydrated form and thus cast doubt on the actual strength of the solution."

Of these solutions, the tincture of phosphorus, prepared by boiling an excess of the drug in absolute alcohol, and diluted, for administration, with alcohol, glycerine

and aromatics, in such proportions that one-twelfth of a grain shall constitute a dose, appears to meet the author's approval, while the ethereal solution he rejects, as nauseous, and that with chloroform, on account of the therapeutic uncertainty of the solvent. Of aqueous solutions he speaks thus: "Phosphorized water, however, is obviously a preparation too unsalable and too uncertain in its composition to be employed in medicine." The use of the drug in solution, in capsules, is objected to on account of the solvent usually employed and the necessary minuteness of the dose; and to its use in pill form many valid objections are urged, such as the difficulty of effecting minute subdivision, liability to ignition, inequality of doses, and tendency to decomposition.

The author's investigations have led him to reject as inert, so far, at least, as any of the effects of free phosphorus are considered, the hypophosphites of sodium and calcium—and this conclusion we most heartily endorse whether these preparations be considered in regard to the therapeutic effect of phosphorus, or of anything else, which they may be supposed to contain.

The phosphide of zinc appears to the author to possess greater advantages and fewer disadvantages for therapeutic purposes than any other preparation of the drug, and this conclusion seems to be sustained by the collateral testimony of contemporary observers. Allotropic, or red phosphorus, is regarded as inert except in so far as it may contain free phosphorus, from which it may be separated by careful washing with bisulphide of carbon.

Regarding zinc phosphide, and other forms, the author formulates the following propositions:

1st. "That solutions of phosphorus in virgin vegetable oils are not safe, and should therefore be entirely rejected."

2nd. "That the solid form is not a perfectly safe mode of administering phosphorus; it may, however, be em-

ployed, but should never be presented to the empty stomach."

3rd. "That the administration of the zinc phosphide should be attended by the use of an acid at the same time."

Of the first forms he suggests no dose. In solution in cod liver oil he suggests the equivalent of one-twelfth of a grain, to be reduced, after continued use during ten days. As a tonic, one-fiftieth of a grain is directed. Of the tinct. phosphide the full dose is said to be three-quarters of a grain, and an average one-third of a grain every two, or, better, every four hours.

In comparison with the dose of other preparations of the drug, the doses of the zinc phosphide here suggested seem disproportionately large, much larger than the dose of the same preparation recommended by Dr. Hammond, the first American authority who has experimented with it; and in view of the rapid supervention of poisonous effects, and their unmanageable character, a note of caution should be appended to this suggestion of the use of such large doses.

Regarding the general therapeutic action of phosphorus, the author's observations confirm those of preceding observers; the cumulative effects noticed by some, he has failed to observe.

The special point of interest in the book, however, is the curative value claimed for the drug, in several forms of nervous disease, but more especially in neuralgias, for the treatment of which, the author regards it almost in the light of a specific, supporting his arguments by reports of many cases, of which he has tabulated fifty, the larger proportion of which recovered or improved under its influence.

While a large experience in the management of this form of nervous disease, and a thorough appreciation of its refractory nature under any mode of treatment, will not permit us to accept, without a doubt, all the author's deductions, it is reasonably certain that we must look to

phosphorus as one of the most valuable agents at our command for the improvement of nerve nutrition and the removal of morbid conditions resulting from the perversion of that process.

In any event, Dr. Thompson is entitled to and should receive the thanks of the profession for this really valuable contribution to the literature of neuro-therapeutics, both for the matter treated and the manner of its treatment, a book which will prove well worth the time spent in its perusal by any one, and which no neurologist can afford to neglect.

H.

NOMENCLATURE OF DISEASE. Prepared for the Use of the Medical Officers of the United States Marine Hospital Service, by the Supervising Surgeon (*Jno. M. Woodworth, M.D.*); being the classification and English Latin Terminology of the Provisional Nomenclature of the Royal College of Physicians, London. Washington: Government Printing Office. 1874.

Dr. Woodworth has hereby added another to the many improvements instituted by him in the administration of the Marine Hospital service since its reorganization, or rather its organization, for before his advent it could scarcely be said to have had a very definite organization. The classification of statistics is the first step toward their utilization, and this classification is, frequently, indeed generally, embarrassed or altogether prevented by the absence of uniformity in nomenclature. The work before us has been accomplished to remedy this difficulty, and will permit the classification of the large mass of statistics, susceptible of accumulation by this department of the Civil Service of our government, which have hitherto been lost to science.

The adoption of the Provisional Nomenclature of the Royal College of Physicians has some advantages, for while it is by no means perfect, nor even the best that might have been devised, it is still recognized as the key to so large a mass of statistics, and what it lacks in accu-

racy, is more than supplemented by its uniformity and comprehension.

Dr. Woodworth is entitled to great credit for the efficient manner in which he has administered the affairs of his Department, of which, perhaps, one of the best criteria is the lack of appreciation manifested in Congress. It does n't pay.

H.

CROUP IN ITS RELATIONS TO TRACHEOTOMY. By *J. Solis Cohen, M.D.*, Lecturer on Laryngoscopy and Diseases of the Throat and Chest, in Jefferson Medical College. Philadelphia : Lindsay & Blakiston. 1874.

The above is a typical example of a most valuable class of works for which general practitioners can never be too grateful to authors, who in these records of their own labors and observations, collated with those of others, thoroughly exhaust the subject, and present its merit in a condensed form to their readers, who are thereby saved days and nights of, oftentimes, fruitless toil in the search after "the grain of wheat in the bushel of chaff."

Dr. Cohen's conclusions concerning the use of tracheotomy in croup are summarized thus :

1. That there are no insuperable contra-indications to tracheotomy in croup ;
2. That the administration of an anæsthetic for the purpose of controlling the child's movements is admissible in performing the operation ; but that it should be used with great caution ;
3. That a careful dissection should be made down to the windpipe, and hæmorrhage be arrested before incising it, whenever there is at all time to do so ;
4. That the incision should be made into the trachea as near the cricoid cartilage as possible, to avoid excessive hæmorrhage, and subsequent accidents which might occasion emphysema ;
5. That a dilator should be used, or a piece of the trachea be excised, whenever any difficulty is encountered in introducing the tube ;

6. That the tube should be dispensed with as soon as possible ; or altogether, if the case will admit of it ;

7. That assiduous attention should be bestowed upon the after treatment, especially that of the wound ; and that a skilled attendant should be within a moment's call for the first twenty-four or forty-eight hours immediately following the operation."

The justice of one of the author's initial propositions cannot fail to be appreciated by every conservative mind, *i.e.* : "Tracheotomy, in itself, does not cure croup. It affords a possibility of recovery by postponing, or insures it by averting, death. The course of the disease is continued until all its attendant phenomena have undergone evolution. The surgeon's knife merely cuts a path for the air to reach the bronchi in quantity sufficient to meet the requirements of the respiratory process, and saves the muscular force exhausted in futile efforts at respiration through the glottis."

Dr. Cohen's little book will become one of the classics. No one who has ever seen a case of croup will fail to derive both pleasure and profit in reading it, and no one who ever expects to see a case can afford to deprive himself of the knowledge which he will thereby acquire.

THE BREATH, AND THE DISEASES WHICH GIVE IT A FETID ODOR: with Directions for Treatment. By *Joseph W. Howe, M.D.*, author of "Emergencies," Clinical Professor of Surgery, in the Medical Department of the University of New York ; Visiting Surgeon to Charity Hospital ; Fellow of the New York Academy of Medicine, etc. New York : D. Appleton & Company. 1875.

It is somewhat remarkable that the subject of fetid breath, which occasions so much annoyance and even mental suffering to its victims, and disgust to all who come within the range of its influence, should have attracted so little attention from authors and investigators. Hence, a thoroughly scientific exposition of the whole subject, such as Dr. Howe has given us, has long been a desideratum.

The contents of the little volume before us comprise "the physiology of repair, decay and respiration, fetid odors from emotion, from dyspepsia, from bad teeth and ulcers of the mouth, from catarrhal disorders, and from mineral poisons; the whole contained in a little volume of one hundred pages, which well deserve the attention of physicians, to whom we commend it most highly.

H.

THE DISEASES OF THE STOMACH; Being the third edition of the "Diagnosis and Treatment of the Varieties of Dyspepsia." Revised and Enlarged by *Wilson Fox, M.D., F.R.C.P., F.R.S.*, Physician Extraordinary to Her Majesty the Queen; Fellow of University College; Corresponding Member of the *Psychisch-Medicinisch-Gesellschaft* of Wurzburg; Holme Professor of Clinical Medicine, University College, London; Physician to University College Hospital. With illustrations. Philadelphia: Henry C. Lea. 1875.

An excellent monograph concerning a class of diseases from which few of us frail mortals are exempt at some time or other in our lives, is presented in the above-named treatise. The author wisely takes for his point of departure, the proposition that pathological conditions are only disturbances of physiological order, and that no new factors are introduced.

Proceeding from such a basis, it is scarcely possible to wander far from the truth,—within the limits of what is clearly defined in physiology. The book consists of two divisions, of which the first comprises the symptomatology of the stomach, including the various appearances of the tongue, derangements of the appetite, thirst, flatulence, acidity and pyrosis, pain, vomiting, indigestion. Of these, the last four subjects are discussed admirably, and the chapters assigned to them are especially worthy of study, as clear and succinct statements of the true pathology of the morbid conditions which express themselves by these symptoms, as deduced from the most recent physiological data.

The student and general practitioner who is not perfectly sure of his physiology cannot devote a few hours to a better purpose than by a careful, thoughtful study of the subject as formulated by this author in these few chapters.

The second division of the book, comprising the special pathology of the stomach, comprehends the subjects, atonic dyspepsia, nervous, acute and chronic catarrh, ulcer, cancer, hæmorrhage, hypertrophy, stricture of the cardiac orifice, obstruction of the pylorus, dilatation, softening, perforation, rupture, tubercle. All of which subjects are discussed in a manner which cannot fail to be both agreeable and instructive to the reader. The subject of the neuroses of the stomach, receives much more attention than is usually assigned to it by systematic writers, a degree of attention which it well deserves, and, indeed imperatively demands, in view of the very indefinite ideas which are entertained just now by so many physicians, of the correlation of nervous functions, and those—so-called, more especially—of organic life. The therapeutics here taught is rational, and as free from the spirit of empiricism as can reasonably be expected, when the crude state of therapeutics is considered.

Amidst all its excellencies, the book is not altogether free from defects, although they are for the most part trivial; it is to be regretted, however, that the author, or his proof reader, should have sacrificed his diphthongs on the altar of the demon of willful ignorance, and thereby contributed to the progress of phonetic corruption which the English language is doomed, like all of its predecessors, to suffer. *Hæmorrhage* has no meaning, unless one which is purely arbitrary, for it has no derivation, no philological relations; and the same may be said of *Etiology*. These are minor defects, but they nevertheless detract from the general excellence of the book, and from the scholastic merit of the author.

BOOKS RECEIVED.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY, including Localized and General Faradization, Localized and Central Galvanization, Electrolysis and Galvano-Cautery. By *George M. Beard, A.M., M.D.*, Member of the New York Society of Neurology and Electrology, etc., etc.; and *A. D. Rockwell, A.M., M.D.*, member of the New York Society of Neurology and Electrology, etc., etc. Second Edition, revised, enlarged and mostly re-written, with nearly two hundred illustrations. New York: William Wood & Co. 1875.

DENTAL PATHOLOGY AND SURGERY. By *S. James Salter, M.B., F.R.S.*, member of the Royal College of Surgeons, etc., etc. New York: William Wood & Co. 1875.

ON THE TREATMENT OF PLEURISY; with an appendix of cases, Showing the Value of Combination of Croton Oil, Ether and Iodine, as Counter Irritants in other Diseases. By *Jno. W. Carson, M.D.*, late Physician to the class of Diseases of the Chest, in the N. Y. and Eastern Dispensaries, etc. N. Y.: W. Wood & Co. 1874.

COMPENDIUM OF CHILDREN'S DISEASES: a Handbook for Practitioners and Students. By *Dr. Johann Steiner*, Professor of the Diseases of Children in the University of Prague, and Physician to the Francis-Joseph Hospital for Sick Children.

Translated from the Second German Edition by *Lawson Tait, F.R.C.S.*, Surgeon to the Birmingham Hospital for Women, Consulting Surgeon to the West Bromwich Hospital, Lecturer on Physiology at the Midland Institute. New York: D. Appleton & Company. 1875.

PHYSICIAN'S OFFICE CASE RECORD BOOK. 1875. Case Record Company, 224 Laurel st., Cincinnati, Ohio.

PHYSICIAN'S POCKET CASE RECORD BOOK. 1875. Case Record Company, 224 Laurel St., Cincinnati, O.

PAMPHLETS RECEIVED.

OZONE, THE ACTIVE OR ELECTRO-NEGATIVE OXYGEN, its Curative Virtues in Therapeutics. By *Dr. Theo. A. Hoffmann.* Beardstown, Ill. 1875.

SELLERS ET AL. vs. THE PENNSYLVANIA RAILROAD COMPANY ET AL. Complainants' Affidavits on Motion for Injunction to restrain Erection of Slaughter House. In the Court of Common Pleas, of Philadelphia County. In Equity. Dec. Term, 1874. No. 3.

NEAR SIGHT, TREATED BY ATROPIA; WITH TABLES. By *Hasket Derby, M.D.*, Surgeon to the Massachusetts Charitable Eye and Ear Infirmary, at Boston, etc., etc. New York. 1875.

MIGRANTS AND SAILORS, Considered in their Relation to Public Health. *A.* Some Defects in the Immigration Service affecting the Sanitary Interests of the Country. By *Jno. M. Woodworth, M.D.*, Supervising Surgeon of Marine Hospital Service. *B.* Sailors as Propagators of Disease. By *Heber Smith, M.D.*, Surgeon U. S. Marine Hospital Service. Cambridge: Printed at the Riverside Press. 1875.

FOURTEENTH BIENNIAL REPORT of the Trustees, Superintendent and Treasurer of the Illinois State Hospital for the Insane, at Jacksonville. Dec., A. D. 1874.

TRANSACTIONS of the American Ophthalmological Society. Tenth Annual Meeting, Newport, July, 1874. New York: Wm. Wood & Co. 1874.

REPORT of one hundred and five Cases of Operation for Cataract.

A SERIES OF AMERICAN CLINICAL LECTURES. Edited by *E. C. Seguin, M.D.*, Vol. i, No. 1. On Disease of the Hip-Joint. By *Lewis A. Sayre, M.D.*, Prof. of Orthopædic Surgery and Clinical Surgery in Bellevue Hospital Medical College, New York. G. P. Putnam's Sons. 1875.

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The Clinic, Cincinnati—Vol. viii, Nos. 5, 6, 7.

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The Cincinnati Lancet and Observer—Vol. xviii, No. 2.

The Detroit Review of Medicine and Pharmacy—February.

The Dental Cosmos—Vol. xvii, No. 2.

The Eclectic Medical Journal.

The Indiana Journal of Medicine—Vol. i, No. 10.

The Half-Yearly Compendium of Medical Science—Part xv, January, 1875.

The Laboratory, Boston—January.

The Medical Record, New York—Vol. x, Nos. 6, 7.

The Medical Times, Philadelphia—Vol. xxx, Feb. 6, 13.

- The Medical and Surgical Reporter, Philadelphia—Vol. xxxii, Nos. 5, 6, 7.
The Medical Examiner, Chicago—February 1, 15.
The Medical News and Library—Vol. xxxiii, No. 386.
The Medical Sciences, Monthly Abstract of—Vol. ii, No. 2.
The Missouri Clinical Record—Vol. i, No. 2.
The Nashville Journal of Medicine and Surgery—February 7.
The New York Medical Journal—Vol. xxi, No. 2.
New Remedies—January, 1875.
The Psychological and Medico-Legal Journal—February.
The Peninsular Journal of Medicine—Vol. xi, No. 2.
El Repertorio Jalisciense, Guadalajara—No. 6, Tomo i, Enero.
The St. Louis Medical and Surgical Journal—Vol. xii, No. 2.
The Virginia Medical Monthly—Vol. i, No. 11.
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Editorial.

Rush Medical College.

The Annual Commencement of Rush Medical College was held at Central Hall on the evening of February 10th. The Degree of Doctor of Medicine was conferred by President J. W. Freer upon seventy-seven candidates, whose names are subjoined. The Valedictory Address of the Faculty was delivered by Prof. Henry M. Lyman, and that of the Class by Dr. Henry Fritcher, one of the graduates.

An elegant gold-headed cane was presented, with an appropriate address by Dr. D. Ernest Sedgwick, on behalf of the class, to Prof. Jos. P. Ross, who responded in a very feeling manner.

The Faculty, Alumni and many friends of the College have great cause for congratulation in the large number of students who have been attracted by the determined efforts which they have made during the last four years to elevate and maintain the standard of professional education, and the time-honored reputation of the school, in spite of material obstacles which, to most men, would have seemed insurmountable. The Faculty have endeav-

ored to supply the absence of imposing buildings and many of their comfortable accessories by an increase in the strength and efficiency of their corps of instructors, in the accuracy and comprehension of the system of instruction, and in the exercise of fidelity and zeal in imparting it. They could ask no better evidence that their efforts have been appreciated than that supplied by the presence of so large a number of students, and by the uniform diligence which they have exhibited in the pursuit of their studies.

The class of 1874 and 5, stands in no respect below its predecessors, in intelligence, in preliminary acquirements, and in studiousness. Some, we feel sure, and many, we hope, are destined to fill high positions in the ranks of their profession.

MEMBERS OF THE GRADUATING CLASS.

W. T. ADAMS.	L. M. GIFFIN.	F. J. POPE.
T. L. ASHBAUGH.	H. L. HARRIS.	J. PEHRSON.
S. L. BAUGH.	T. E. HALL.	J. P. PARKS.
S. H. BELL.	J. L. HILL.	W. G. PUTNEY.
J. G. BERRY.	R. G. HEALEY.	GEORGE RILEY.
A. H. BILL.	WM. HUTCHINSON.	A. J. RYAN.
J. H. BINNIE.	R. W. HOYT.	F. REYNER.
J. B. BLUE.	H. L. HARRINGTON.	W. F. REYNOLDS.
N. D. CAMPBELL.	J. S. KAUFFMAN.	L. C. SEELEY.
H. A. CLARKE.	H. B. LOSEY.	D. E. SEDGWICK.
R. D. CLARKE.	E. H. LOCKWOOD.	W. W. SQUIRE.
W. B. CALDWELL.	W. F. LEWIS.	CHAS. SCOTT.
J. H. CRAIG.	G. D. LADD.	A. T. STEELE.
I. H. CADWALLADER.	E. M. LANDIS.	G. F. SCHREIBER.
E. A. CARPENTER.	O. J. LOWRY.	F. TURNER.
T. H. CORNWALL.	G. W. MCKINNEY.	A. D. TAYLOR.
M. CASSINGHAM.	C. A. McDONELL.	G. T. THOMAS.
D. A. DRENNAN.	C. MANTOR.	J. W. TRIMMER.
E. H. DUDLEY.	J. D. MANDEVILLE.	J. H. THOMPSON.
CHAS. EGAN.	D. D. MARR.	F. J. WILKIE.
W. C. EGAN.	T. M. MICHAELS.	W. H. WATSON.
M. L. FULLENWIDER.	W. W. MULLIKEN.	L. R. WILLIAMS.
L. M. FOCHT.	T. C. MCCLEERY.	S. S. WEIDNER.
G. W. FARROW.	J. J. McFADDEN.	A. L. R. WHEELER.
L. A. H. FRIEDERICH.	F. H. MORRICAL.	G. W. WHEELAND.
H. FRITCHER.	J. A. NOWLAN.	

HONORARY DEGREE.

Prof. ALBERT SMITH, MD., LL. D., Peterborough, N. H.

Ad Eundem — J. C. JOHNSTON.

We cannot better commend to our readers a new and excellent enterprise, in the field of Medical Journalism, than by subjoining, in full, Messrs. G. P. Putnam's Sons' announcement of "A Series of American Clinical Lectures," which speaks for itself.

The first lecture of the series, that of Prof. Sayre, on Diseases of the Hip-Joint, has already appeared and fulfills the promises of the editor and publishers and the expectations of readers. We sincerely hope that the enterprise will meet with such encouragement as will justify its continuance and extension into a wider field.

H.

A SERIES OF AMERICAN CLINICAL LECTURES.

G. P. PUTNAM'S SONS have the pleasure of announcing to the Medical profession that they purpose to commence the publication of a series of *Clinical Lectures* by representative American Medical Teachers, upon topics of practical interest.

The enterprise has been suggested by the Volkmann "Sammlung klinischer Vorträge" (Collection of Clinical Lectures), which has met with great success, and fills an important place in the Medical literature of Germany, and the special value of which is well known to many in this country.

It is intended to select for publication in the series only lectures by recognized Medical instructors; either Professors in Colleges, or Hospital Physicians, in the large cities of the United States. These lectures to be upon medical, surgical, and a few special topics.

The lectures will express not only the personal views of the lecturers upon the subjects treated of, but also the latest pathological and therapeutical opinions connected with these topics, and will therefore be trustworthy guides to practice. It is expected that these lectures, presenting in compact and economical shape the most advanced thought, combined with practical instruction, will be found equally valuable by advanced medical students and by practitioners.

The series will be begun by the publication of one lecture each month, but if sufficient encouragement be received, it is proposed to make the issue semi-monthly.

The lectures will be carefully and handsomely printed in pamphlet form; each number to contain from twenty to thirty octavo pages, which will be so proportioned as to leave ample margin for binding.

For the first year no subscriptions will be received, but the lectures will be sold separately at from 30 to 50 cents each.

The series will be under the editorial control of Dr. E. C. SEGUIN, who desires to state that he has already received the most encouraging support for the enterprise, and has arranged for early contributions from

Prof. AUSTIN FLINT, Sr., Prof. LEWIS A. SAYRE, Prof. ALFRED L. LOOMIS, Prof. A. JACOBI, Prof. T. G. THOMAS, Prof. W. H. THOMSON, Prof. H. B. SANDS, Prof. W. H. Draper; all of New York.

The first number of the series will be ready about February 1st, and will consist of a lecture by Prof. LEWIS A. SAYRE, on Disease of the Hip-Joint.

In order to direct the attention of the profession, and through them of the public at large, to the claims of a class of population deserving in the highest degree the charity of all, we republish with much pleasure, "an eloquent appeal on behalf of these unfortunates," "Feeble-Minded Children," more especially as the case which constitutes the illustration of the appeal, is personally known to the Junior Editor of the JOURNAL, who was consulted professionally in regard to him, and who advised that he be placed in the Institution, where his improvement has been so decided as to elicit this appeal from the father, a worthy citizen of this city.

We deem the very worthy character of the object, and our personal knowledge of the parties, a sufficient apology for departing from our rule, in republishing matter from secular journals—the "appeal" having first appeared as a communication to the "Editor of the Post and Mail," of this city.

FEEBLE-MINDED CHILDREN.

AN ELOQUENT APPEAL ON BEHALF OF THE STATE INSTITUTION FOR THESE UNFORTUNATES.

To the Editor of the Chicago Post and Mail.

SIR—In the Governor's late message he recommends an appropriation for the benefit of the Institution for Feeble-Minded Children, at Jacksonville. There is a bill now under consideration in the House, making such an appropriation. I have a son seven years of age in this institution. For years I have expended large sums of money upon physicians and teachers for him, besides an unlimited amount of care. We have, however, never been able to teach him the alphabet, to play with other children, or to sit properly at the table. Now, after three months at this institution, he does all these things gracefully and well. With this experience I cannot find words to sufficiently commend the institution. I have no doubt, under its care, he will become a useful man. No one can doubt the importance of this work. It cannot be done by parents or private teachers.

They have not the experience or skill such as can be found in an institution set apart for the purpose.

Now, notwithstanding its importance, this institution occupies small wooden tenements liable to fire, and poorly arranged. The buildings have accommodations for only eighty pupils, while there are one hundred in attendance. During its existence of only eight years there have been over six hundred applications for admission.

According to the report of the Illinois Medical Society, a building large enough to equal the demands of the State should have accommodations for at least three hundred pupils. With the success it has already accomplished, in its cramped condition, what could it not do with proper buildings and resources? Why should the State not give the managers an opportunity to extend these blessings to others, and to make feeble-minded children able men and women, rather than consign them to the almshouses for life?

It is my earnest desire that the Legislature will make such an appropriation, and I have no doubt it would return tenfold blessings for the expenditure.

SAMUEL GOLDMAN.

Chicago, Jan. 30, 1875.

Institution for the Feeble-Minded.

MEMORIAL OF THE ILLINOIS STATE MEDICAL ASSOCIATION TO THE TWENTY-NINTH GENERAL ASSEMBLY OF THE STATE OF ILLINOIS.

To the Honorable Senate and House of Representatives of the State of Illinois:

The undersigned would respectfully represent to your honorable body, that at the annual session of the Illinois State Medical Association, an organization extending over the entire State, holden at Chicago, in May, 1874, the following resolution of Dr. J. H. Hollister, of Chicago, now president of the Association, was unanimously adopted:

Resolved, That a committee of three, consisting of Drs. W. P. Peirce, of Lemont, Cook county; J. L. White, of Bloomington, McLean county, and E. P. Cook, of Mendota, LaSalle county, shall prepare and present a memorial from the Illinois State Medical Association to the next General Assembly of Illinois, earnestly recommending appropriations to erect buildings for the custody, care and instruction of the idiots and feeble-minded children of the State.

This committee, as in duty bound, have proceeded to make investigation into the condition and wants of the idiotic and feeble-minded among our growing population; to take into consideration their number and present condition; and also, what steps are being taken by the State to place them on a level with those other children of misfortune, which it is the just pride and boast of our State to bring within the arms of its all-embracing charity.

Your petitioners take the liberty to say, that in all enlightened States and countries throughout the civilized world, there is no class to which a more lively sympathy is now being extended than the one we have in view. That it is, indeed, the crowning triumph of the country in which we live, that this class, until lately abandoned as beyond hope of being raised in the scale of humanity, left as the prey of brutish instincts, and to remain

as a reproach to the species whose form they wear, can now be humanized, taught and educated, and, as it were, brought back to common tastes, enjoyments and spheres of ordinary usefulness. The astonishing success attending the efforts to raise and instruct this hitherto neglected class, has resulted in the permanent establishment of special institutions for their benefit, that are now universally recognized as at least equal in importance with any others which States feel it a duty and a satisfaction to provide.

Institutions of this class abound in all the leading countries of Europe, and their success forms one of the brightest pages of the progress of humanity and social science.

In our own country, quick to follow the lead, and as we believe, bound to excel the Old World in all that relates to human progress, Massachusetts has already three institutions; New York two, and Connecticut, Pennsylvania, Ohio, Kentucky and Georgia one each, to which is to be added the embryo attempt in our own State; hence the subject is no longer an experiment, but stands approved and sanctioned by the best thought of the age in which we live.

As to the magnitude of this subject, we respectfully refer you to unquestioned statistics.

From returns received by the Secretary of the Board of Public Charities for the State of Illinois, and published in its first biennial report, there were reported to said board, by the physicians of the State, the names of 1,738 idiotic persons as actually then resident in the State. This is much less than the actual number, for the difficulties in the way of gaining accurate information in relation to the defective classes of society are well known.

Without question the idiotic at least equal if not exceed the insane in point of numbers, and it is safe to say that there are now in the State of Illinois 3,000 subjects, who, in the strict medical application of the term, would be classed as idiotic.

The number of those actually fitted for instruction is indicated in the records of the school now in operation in Jacksonville in this State. By these it appears that there are now six hundred and eighty-one recorded applicants for admission to that institution.

When it is reflected that these have the same natural claims for instruction belonging to all the children in the State, that they are excluded from ordinary schools, and must remain uninstructed except as the State specially provides for them, their serious claims for legislative regard become at once manifest. Many obstacles exist to their admission into ordinary schools, for their feeble capacities put them at a disadvantage, and they cannot be classified with other scholars of better aptitudes. Even if they are children of persons in good circumstances, having considerable capacity for instruction, motives of justifiable pride prevent them from permitting them to associate with other children, who so naturally make a sport of their misfortune.

Many of them are found in our almshouses, where their condition is most pitiable, and where, from the almost inevitable liabilities of the case, they become subject to neglect and wrong, in some instances outraging every sentiment of humanity.

Hence neglect and brutish ignorance seem the inevitable lot of this most unhappy class, unless the State includes them among the other objects of its care, like the insane, the blind, and the deaf and dumb, whose claim on the public sympathy is certainly no stronger.

Your petitioners can point with a most pleasing satisfaction to the results obtained from the experiment inaugurated in the year 1865. It has already passed beyond the limits of experiment.

From small beginnings, and by an outlay proportionally small, it has taken a position second to no charitable institution of the State, so far as its sphere of usefulness has been able to extend.

Upon leased premises, with cheap and inconvenient buildings, as a temporary resort must necessarily be, and already filled to their utmost capacity, one hundred and four pupils are congregated, and a much larger number are seeking admission.

No one can visit this institution without being touched with feelings of gratitude, in behalf of a common humanity, that a new door is so successfully opened whereby a class hitherto consigned to mental darkness, may find egress to those higher lights of knowledge, that our State provides for all its children.

We speak the sentiments of a profession more intimately acquainted with all the forms of suffering humanity, and as well informed as any in regard to the requirements of public opinion, when we most respectfully yet strongly urge that the needful appropriations be at once made to put the measure we have in view upon a permanent footing, by the provision of safe buildings and other facilities commensurate with the magnitude of the interests involved.

And thus your petitioners, a committee of the Medical Association of the State of Illinois, ever pray.

[Signed] WM. P. PEIRCE, M.D., of Lemont, Cook county.

J. L. WHITE, M.D., of Bloomington, McLean county.

E. P. COOK, M.D., of Mendota, LaSalle county.

Chicago Mortality Report for January, 1875. Reported by

Dr. BEN. C. MILLER, Sanitary Superintendent.

Accident, by burns.....	1	Asphyxia.....	1
" crushed.....	1	Asthma.....	4
" by explosion.....	2	Ascitis.....	2
" by fall.....	2	Atelectasis pulmonum.....	3
" by rupture.....	1	Bowels, intussusception of.....	1
" by poisoning.....	1	Brain, abscess of.....	1
" by fracture of spine.....	1	" congestion of.....	12
" by suffocation.....	1	" inflammation of.....	1
" by scalding.....	1	" softening of.....	2
" by railroad.....	5	Bronchitis.....	4
Aphthæ.....	1	" capillary.....	12
Apoplexy.....	7	Caries of vertebra.....	1
Arachnitis.....	1	Caries exanthema.....	1

Catarrh pulmonum.....	1	Liver, cirrhosis of.....	2
Cancer of breast.....	2	“ inflammation of.....	1
“ of knee.....	1	“ apoplexy of.....	1
“ of stomach.....	6	Lungs, congestion of.....	10
“ of uterus.....	1	“ hemorrhage of.....	2
Child birth.....	2	“ paralysis of.....	1
Cholera infantum.....	1	Metro peritonitis.....	1
Consumption.....	59	Measles.....	5
Convulsions.....	85	Meningitis.....	4
Croup.....	8	“ cerebro-spinal.....	3
“ membranous.....	3	“ tubercular.....	2
Cyanosis.....	2	Old age.....	16
Debility, general.....	11	Paralysis.....	6
Delirium tremens.....	1	Pericarditis.....	1
Diabetes.....	1	Peritonitis.....	1
Diarrhoea.....	5	“ puerperal.....	2
“ chronic.....	1	Pelvic cellulitis.....	1
Diphtheria.....	10	Pneumonia.....	53
Dropsy, general.....	11	“ typhoid.....	9
Dysentery.....	1	Pneumo thorax.....	1
Embolism.....	2	Pleuritis uterine.....	1
Enteritis.....	9	Pleurisy.....	2
Epilepsy.....	1	Pyæmia.....	2
Exposure.....	4	Rheumatism.....	2
Erysipelas.....	5	“ inflammatory.....	1
Exhaustion.....	1	Sarcoma.....	1
Fever, puerperal.....	8	Scrofula.....	3
“ scarlet.....	7	Septicæmia.....	1
“ typhoid.....	11	“ puerperal.....	1
Gangrene.....	1	Spine and brain inflammation.....	1
Gastritis.....	3	Stomach hemorrhage.....	2
Hemorrhage, umbilical.....	2	“ congestion.....	1
Heart, organic disease of.....	2	Syphilis.....	4
“ hypertrophy of.....	2	Suicide, arsenic.....	1
“ valvular disease of.....	2	“ hanging.....	3
“ paralysis of.....	1	“ cutting throat.....	1
Hepatitis.....	1	“ shooting.....	1
Hip disease.....	1	Syncope following child birth.....	1
Hernia, strangulated.....	1	Tabes mesenterica.....	13
Hydrocephalus.....	6	Manslaughter.....	2
Inanition.....	6	Teething.....	3
Intemperance.....	6	Tetanus.....	1
Icterus.....	1	Trismus.....	2
Ileus.....	1	Urine, retention of.....	1
Influenza.....	1	Uræmia.....	1
Jaundice.....	1	Uterus, hemorrhage of.....	2
Kidneys, disease of.....	1	Worms.....	1
“ Bright's disease of.....	1	Whooping cough.....	1
“ inflammation of.....	2	Womb and bowels, congestion of.....	1
Laryngitis.....	2		
Leucocythemia.....	1	Total.....	568

Premature births, 7; Still births, 54. Total, 61.

COMPARISON.

Deaths in January, 1875, 568; in December, 1874, 455. Increase, 113.
Deaths in January, 1874, 535. Increase, 33.

AGES.

Under one year.....	186	Thirty years to forty.....	61
One year to two.....	29	Forty " " fifty.....	58
Two years to three.....	31	Fifty " " sixty.....	39
Three " " four.....	10	Sixty " " seventy.....	32
Four " " five.....	10	Seventy " " eighty.....	20
Five " " ten.....	16	Eighty " " ninety.....	11
Ten " " twenty.....	20	Ninety " " one hundred.....	3
Twenty " " thirty.....	42	Total.....	568
Males.....	304	Colored.....	12
Females.....	264	White.....	556
Total.....	568	Total.....	568

Married, 214; Single, 354. Total, 568.

NATIVITIES.

Austria.....	1	Denmark.....	4	Norway 10 N'foun'd.....	11
Bohemia.....	2	England.....	12	Scotland.....	5
Canada.....	2	France.....	1	Sweden.....	5
Native—Chicago.....	76	Germany.....	76	Switzerland.....	1
Foreign, ".....	187	Ireland.....	79	Unknown.....	14
U. States, other parts.....	91	Italy.....	1	Total.....	568

Deaths daily, 17½.

Mean thermometer, 19°. Rain fall, .96 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	4	5,725	one death in 1,431
2	7	4,830	" " 690
3	22	14,861	" " 675
4	14	15,361	" " 1,097
5	20	20,078	" " 1,004
6	51	35,916	" " 704
7	50	31,722	" " 634
8	39	29,143	" " 748
9	35	31,654	" " 904
10	25	17,385	" " 695
11	23	14,022	" " 610
12	17	16,792	" " 988
13	23	17,892	" " 778
14	20	16,720	" " 836
15	80	45,545	" " 569
16	24	21,922	" " 913
17	14	20,777	" " 1,484
18	22	21,392	" " 972
19	5	4,677	" " 935
20	9	8,995	" " 999

504 Ratio of deaths to population in 1874, one death in 870½.

No. deaths in Wards.....	504	Manslaughter.....	2
Accidents.....	17	Mercy Hospital.....	5
Barge.....	9	Police Station.....	2
Hospital County.....	1	St. Luke's Hospital.....	2
Foundlings' Home.....	16	Snicides.....	6
Hospital Alexian Bros.....	3	Total.....	568
Home for Friendless.....	1		

THE
Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.: AND WALTER HAY, M.D.

VOL. XXXII. — APRIL, 1875. — No. 4.

Original Communications.

ARTICLE I.

THE MEDICAL EXPERT AND MEDICAL EVIDENCE.

By M. A. McCLELLAND, M.D., KNOXVILLE, ILL.

(Concluded from page 171.)

WILLS.

Quite frequently the physician is called upon to write a will, and a discussion of the principles upon which these documents are based, will not be out of place in this connection.

The first great duty the physician must observe, is to ascertain the bodily and mental condition of the testator. "Less mind," it has been decided, (*Nichols v. Nichols*, 31 Vt. 331), "is ordinarily requisite to make a will, than a contract for sale," for the reason, "that in contracts of sale there are usually two parties, and some degree of antagonism between their interests and efforts;" while in making a will "one is left free to act upon his own perceptions merely."

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"An understanding of the business about which the testator was engaged, of the kind and value of the property devised, and of the persons who were the natural objects of his bounty, and of the manner in which he wished to dispose of his property, are all the evidence, it has been ruled in Illinois, of the possession of testamentary capacity, unless the testator was affected with some morbid or insane delusion as to some one of those natural objects of his bounty." (W. & S. Med. Jurisp., §§ 19, 31.) If this unsoundness arises "from want of intelligence occasioned by defective organization, or by supervening physical infirmity, or the decay of advancing age, as distinguished from mental derangement," it alike incapacitates.

Mental soundness being presumed, the person writing the will is to limit himself to such inquiries as may enable him to understand the testator's wishes. These wishes he is to write down in the fewest, simplest and clearest words. The document is to have the name of the *place* where executed, with *exact* date of the transaction, and at the foot of the writing the signature of the testator, if possible, in his own handwriting.

The foregoing indications of "mental capacity" are given to guide the physician in respect to the propriety of drafting the will. When the document comes to be contested in court, the physician can be required to testify as to all the facts in the case, and he may give his opinion on "mental capacity" from facts observed by himself, but a physician not personally acquainted with the facts, must give his testimony on a hypothetical case, and is to express no opinion till he also knows the contents of the "will" in question. Even if the physician has observed the facts himself, unless he can state the grounds of his opinions, they are no better than surmises. Unless he is well informed upon these matters, he had better restrict himself to the functions of an ordinary witness, refusing to pass upon the question in issue on the ground of want of special study. By this course

he will reflect honor upon himself and will assist in confirming popular confidence in the decisions of the law.

UNNECESSARY VISITS.

"Physicians are frequently charged with making unnecessary visits, and their bills are often paid very grudgingly, indeed, they may be able to collect them only by law. The investigation of such a case as this is a very difficult one, and the physician is to remember when called upon to testify in such a case, that the physician in attendance is the one properly to judge in these matters, each case being a law unto itself, and the responsibilities are his. The files of prescriptions, proving positive treatment of the disease said to have been diagnosed, would go far to prove the visits were necessary."

APHORISMS.

Any injury to the health or any death proved to have occurred subsequent to medical treatment, is to be imputed to the physician, when his treatment has been quite different from what is taught orally and in books, by his acknowledged scientific compeers, as the proper treatment, according to the rules of art, for such a case or one similar to it, and which is universally acknowledged by the medical experience of his compeers to be correct. (Caspar.)

"Life," in legal parlance, is equivalent to "respiration,"—not to have breathed is not to have lived. Therefore, to the question whether in a given case the *fœtus in utero* did not live, it should be replied that only life dependent upon *respiration* can be proved. (Caspar.)

"It is the right and duty of the forensic physician to give his testimony not only in accordance with the letter but also with the spirit of the law."

"In questions of legal responsibility, let the judge

put special questions to the medical witness, referring to the individual case." (Bocker.)

"In respect to conditions upon which insanity depends, in by far the larger number of cases, *post mortem* examinations reveal some material changes. And if that material change is not noted, it should not be confidently asserted that no such change has taken place, but rather ascribe it to the inability of the observer, or to the want of those accessories of investigation that are necessary."

"A forensic physician, in a psychological case, has or may have two distinct functions, viz. : First, to determine how far a case of mental alienation is dependent upon bodily disease ; and, second, to ascertain whether mental alienation is really present. To those who believe that there may be mental without physical disease, this proposition will be objectionable."

"Medical skill is not, in many instances, and without reference to the particular circumstances of the case, decisive as to the cause of death ; and persons of science must, in order to form their own conclusions and opinions, rely partly on external circumstances." (Roscoe's Crim. Ev.)

Experts.—There is no established form for questions to experts. * * Any question may be proper which will elicit their opinions as to matters of science or skill, which are in controversy, and at the same time exclude their opinion as to the effect of the evidence in establishing controverted facts. (*Hunt v. Gaslight Co.*, 8 Allen.)

It is not admissible to permit a medical witness to give an opinion in a case where he has no means of ascertaining the facts in respect to which his opinion is asked. (*Millard v. Brown*, 35 N. Y.)

The opinion of an expert must be predicated on facts proved or admitted, or such as appear in evidence hypothetically stated. One not an expert must give facts, and

circumstances within his own knowledge as the ground of his opinion. (*Roach v. Zehring*, 59 Pa.)

"The rules prescribing the qualifications of experts are established by law; but whether a witness offered as an expert has the legal qualifications which entitle him to testify in that capacity, is a question of fact to be decided by the court, in the exercise of its discretion, at the trial of the cause; and the decision of the presiding judge, in such a case, is not subject to exception or revision." (*Dole v. Johnson*, 50 N. H.; *Taylor v. Roger Williams Ins. Co.*, 50 or 51 N. H.)

"A physician, as a witness, cannot be allowed to express his professional opinion as necessarily to imply his belief of material facts outside of his art or profession, and not within his own knowledge, and which are not in their nature subject matter of mere opinion." (*Moore v. State of Ohio*, 17 O. S. R. 521; *McCurry v. Hooper*, 12 Ala. 823.)

"A physician cannot give an opinion as to whether another physician had acted honorably and faithfully; nor can he give an opinion on the opinion of another expert." (*Campbell v. Richards*, 5 B. & Adolph. 840; *Ramadge v. Ryan*, 9 Bingh. 333; *Heath v. Wing*, 45 Maine, 392; *Weatherbee's Executors v. Weatherbee's Heirs*, 38 Vt. 454.)

"A medical witness may, when the issue is sanity or insanity, be asked whether such and such symptoms proved by other witnesses, are, in his judgment, *symptoms* of insanity; but he cannot be asked if the act with which the defendant is charged is an insane act, for this is a fact to be decided by the jury." (*Rex v. Wright*, R. & R. 456; *Rex v. Searle*, 1 M. & Bab. 75; *Collet v. Collet*, 1 Curtis, 687; *Malton v. Nesbit*, 1 C. & P. 72.)

"It is not proper to inquire of a medical witness whether the person in question possessed sufficient capacity to transact business or to make a will." (*White v. Bailey*, 10 Mich. 155.)

"Special knowledge must be fully established before a witness can be examined as an expert." (*Sinclair v. Roush*, 14 Ind. 450; *Winans v. N. Y. & E. R. R. Co.*, 21 Howard U. S. 88; *Com. v. Wilson*, 1 Gray, 337; *Daniels v. Mosher*, 2 Mich. 183; *Lester v. Pittsfield*, 7 Vt. 161; *Mendum v. Com.*, 6 Rand. 704; *Elfelt v. Smith*, 1 Minn. 125.)

"Experts may be asked as to hypothetical facts, but not as to conclusions of law.

"They may also be examined as to conclusions of science drawn from particular experiments. But not as to their opinions on matters not of their particular science.

"Examinations made *ex parte*, when there could have been notice to the opposite side, are inadmissible. But investigations by persons having intimate and continuous opportunities of examination are not excluded because *ex parte*, when these investigations would not be enhanced in accuracy and authoritativeness by being preceded by notice to the opposite side." (Wharton & Stille, §§ 1243—1247.)

CONCLUSION.

It will be seen from the foregoing citations, that what with the adverse rulings of the courts as to what questions may and what may not be answered by the expert; with the case complicated by questions upon hypothetical statements of fact, so framed as to bring out the answer most favorable to the side propounding them; with the notable difference or seeming difference of opinion among medical witnesses themselves; that the "expert's" position is not a very enviable one, and that there is an urgent necessity for so modifying the laws bearing upon this kind of testimony, that the "*best*" may be had in every case.

To the plans proposed by Professor Washburn and others, already cited, I do not know how I can serve the profession better than by transcribing in full § 1250 of Wharton & Stille's Medical Jurisprudence, bearing upon the same subject.

In the medico-legal system in force in Germany, there is first a county or city physician, who has been scientifically trained in medicine, surgery and obstetrics. In addition to this, he is to prepare himself and be examined in the specialty of medical jurisprudence, which examination is to be conducted by the supreme medical board of the State. Associated with the city or county physician, there is a city or county surgeon. These may differ in opinion, in which case there is an appeal taken to the medical tribunal of the province (State); finally, an appellate court medical for the whole monarchy. Messrs. Wharton & Stille, after developing the above principles, go on to state, § 1250 :

“A similar system could be readily grafted on our American practice. We are familiar with army physicians and army surgeons, and of subordination in rank in these officers. There would be no difficulty in providing in each county for a county physician, who by tests of an adequate competitive examination, shall show his general and special competency for this particular post. In addition to the duties devolved on him of conducting post mortem examinations, and of pursuing any other investigations that may be required in a litigated issue, such a physician might be made the arbiter in those moot questions by which the law has been kept in a state of such distressing incertitude. Is there such a disease as moral insanity or as *mania transitoria*? Can human blood stains be distinguished after having become dried? If a question of this kind arise on the trial of a cause, it would not be inconsistent with the analogies of the law to refer it to an official expert, just in the same way that a chancellor sends a question of fact to be determined by a master in chancery or by a common law court and jury. But if this be done, it should be done with the checks that attend the chancery system which has just been noticed. The official physician who acts as referee must be placed under judicial restraints. He should owe his appointment to neither party, but to the

State, irrespective of any particular case. His duty it should be to take testimony, if needed, on the case, and to hear counsel, so that he will be in no danger of hazarding one of those rash and ignorant opinions which have so much disgraced this branch of medical practice. After thus judicially hearing the case, it should be his further duty to judicially certify his opinion to the court by whom the reference is made. In proper cases there might be allowed an appeal from such opinions to a supreme court of governmental experts appointed by the State at large.

“It may be said that this may be productive of occasional delay. This is true; but the difficulties thus arising would not be so great as those which almost every contested medical issue now involves, and which in cases of insanity, have led courts so often to grant new trials from sheer despair of drawing a decisive conclusion from the jargon thus introduced. Soon, also, the delay of appeals would be reduced; for certain great cardinal questions would be settled beyond dispute. We should soon know whether there is such a thing as moral insanity, and whether it is practical to distinguish human blood after the expiration of a week from the period of its drying. Settle a few of such points as these, and we relieve criminal justice of a large part of the uncertainties by which it is now beset, and we will have a series of rules, by which cases can be intelligently, consistently and humanely conducted. Nor will this be all. We will be able to get the judicial utterances of science as to vexed issues of fact, instead of the interested arguments of experts, who are virtually employed as counsel by the party calling them, or the wild utterances of philosophic monomaniacs who are called simply because of their absorption in some unique theory of their special concoction. Such men need not be silenced. Experts as counsel, indeed, will find a proper and important office in presenting the two sides of the issue to the expert who acts as referee. But the expert who fills this last judicial

post will be disembarrassed of all personal relations. He will have no client to serve and no past partizan extravagances to vindicate. He will render his opinion as the advocate neither of another nor of himself. When he speaks, he will do so judicially, as the representative of the sense of the special branch of science which the case invokes, governed by the opinion of the great body of scientists in this relation, and advised of the most recent investigations. When this is done, we will have expert evidence rescued from the disrepute into which it has fallen, and invested with its true rights as the expression of the particular branch of science for which it speaks."

A last rule for the government of the medical expert is this: Do not be too free in the expression of opinions off the witness stand. Time and again physicians are subpoenaed as witnesses, and their knowledge used by counsel in the management of the case, after which they are not called upon the stand and receive no fee for their attendance beyond the ordinary witness fee. Require for such opinions the same remuneration you would upon the stand. Give no opinion till such fee is paid.

The above is deduced from some personal experience which it may not be out of place to relate in this connection.

In the case of the *People v. Swanson*, alleged murder by poisoning, taken by change of venue from Knox to Warren Co., State of Illinois, the attorneys for defendant availed themselves of my library in preparing themselves for the trial. My knowledge of those matters was also solicited, under an express agreement that I would not be subpoenaed in the case. Under such conditions I rendered what aid I could, as the attorney who availed himself of my courtesy was a personal friend. My surprise was very great, at a visit from the sheriff, just before the sitting of the court, with a notice to appear and testify as to what I knew in the case. This invita-

tion I did not feel at liberty to refuse. During the progress of the case both myself and the chemical expert for the defense were consulted frequently in respect to certain testimony given for the people, and when it was learned that we both coincided with the opinions of these witnesses, I was excused from further attendance, and I believe also the chemical expert. For the attendance of the better part of two weeks, a witness fee of some ten or twelve dollars was subsequently paid me by the people.

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ARTICLE II.

SYPHILIS: ITS MATERIALS AND FORCES;

WHAT THEY ARE, WHAT THEY DO, AND HOW THEY DO IT, IN THE PRODUCTION OF THE PHENOMENA CALLED SYPHILITIC IN LIVING HUMAN BODIES; AND OUTLINES OF ITS CLINICAL MANAGEMENT.

By Z. COLLINS MCELROY, M.D., ZANESVILLE, O.

(From the Proceedings of the Zanesville Academy of Medicine, Zanesville, O.,
March 11, 1875.)

My first acquaintance with syphilis was in the "Venereal Wards" of the "Pennsylvania" and "Blockley" Hospitals in Philadelphia, and dates back nearly thirty years. I had heard before commencing the study of medicine, of the "bad disorder," with its "blue bores" in the groins, sore throat, and skin eruptions, and I had read in the newspapers the "important announcement" of "Drs. Humberg & Son," who ran "Lock Hospitals" in several large cities for the "cure" of the "afflicted" in "that" and other "ways."

But in the "Blockley," as a medical student, I was brought face to face with it; examined the sores, fungous growths, eruptions on the skin, etc., etc., of the patients there; heard the "clinical lectures" on the subject; watched the treatment; read "Hunter on the Venereal," "Ricord," and "Vidal," and, later, "Bumstead"; studied "Cullerier's" atlas; and carefully read the contributions to the medical press during my time, down to "Hutchinson" and "Drysdale"; and during my professional career have had some cases to manage, and have had many opportunities to study it, which were not neglected. I was most thoroughly taught, and as thoroughly believed, that "syphilis" was a veritable "disease," and no mistake.

There came a time, however, in my professional life, when the whole subject of "diseases" was overhauled, resulting in some important modifications of my creed in regard to sickness, which, of course, included syphilis.

In regard to it, I faced the alternative of becoming a skeptic, and rejecting much I had been taught, and up to this time believed, regarding its mode of operation, pathology and remedial management; or accepting what I cannot help regarding as a plain, common sense understanding of all the facts in regard to it, viz., that while the train of phenomena in living human bodies called syphilis, can, in our time, nearly always be traced to contact, it had a beginning which was not so, which might be repeated. That it was not, *sui generis* (of its own kind) a condition always the same; and that remedial proceedings had some better foundation than empiricism. And finally, that it had near relations to a large group of so-called "diseases," whose sequelæ were characterized by permanent modifications, and losses of the natural structural arrangement of the material of living bodies, upon which natural or normal function depends, with, consequently, modifications and losses of function as these changes of structure progress.

What these teachings were, it is the purpose of this paper to state.

That to which the phenomena of so-called syphilis is due is designated "a specific virus or poison;" always communicated by actual contact or inoculation, (contagious or infectious.) The "virus" is supposed to be composed of, or contain, "germs," which, when introduced into an uninfected body, hypodermically, develop the "disease." It is certainly a matter to be noticed that it must be introduced otherwise than through the stomach to develop the disease. And whether it is directly through the external integument, or internal mucous membrane, it is, to all intents and purposes, "hypodermically," *i. e.*, through the investing integument.

I cannot help regarding this explanation of the modus operandi of any cause of any so-called "disease" as a most mischievous and misleading one. A "germ," according to Dunglison, means "the rudiment of a new being, not yet developed." "Germ force" means

“plastic force;” and “plastic force” means “the generative or formative power in organized bodies;” or, simply, “that which serves to form.” Webster defines “germ,” as, “In botany, the ovary or seed bud of a plant.” “Plastic,” as having the power to give form, or fashion, to a mass of matter. Does the so-called “syphilitic virus” do anything of this kind? It seems to me it does not. What it does is exactly the reverse, viz., modify or change, more or less completely, or entirely break up, existing “forms,” or molecular arrangement of material in a living body, or structure. And its power, or force, everywhere else in nature than in a living body* is just *nil*, nothing. And, as function is altogether dependent on “molecular forms of structure,” or the special molecular arrangement of material in living structure, as they are modified, changed, or lost, so is function modified, changed, or lost, whether by the “force stored up” in the “syphilitic virus,” or any other of the numerous modes of force, “stored up in material” which changes, modifies, or breaks up the molecular arrangement of material in any living body. No existing function of a living body is bettered, or a new function added, in consequence of the work of the so-called “syphilitic virus.” The sole effects of any of the modes of force “stored up” in material, which, in “living bodies,” changes, or modifies, or breaks up the special structural arrangement of material in them, is “destructive,”—not “formative,” or “constructive.” Their materials are not “plastic”; nor is the force stored up in them “formative.” And the application to any of them of the term “germ” is a misnomer, and mislead-

* Hunter's conclusions that syphilis could not be communicated to any inferior animals, proves to be incorrect. Turenne, in 1844 (France) succeeded in infecting monkeys. That rabbits, cats and horses could be infected from the monkey. His experiments lead to the idea of “syphilization,” from the fact that inoculations became weaker and weaker as they were repeated; and a point was reached at which no further sores could be produced. His conclusion was, that prolonged inoculation ultimately resulted in “protection.” In what way will be shown by and by.

ing, without new or modified definitions of the word ; for the work of the builders of a house cannot be the same as the work of those who take or tear it down.

Rindfleisch, in the brief introduction to his work on "Pathological Histology," declares that there is not, in the whole range of pathology, a single lesion, or modification of structure, no matter to what cause it is due, which is not exactly similar to the changes of structure wrought by age or time.

The "germ," or "egg," or "cell" part of the so-called "virus" or "poison" of so-called "syphilis," is, therefore, altogether an assumption ; for nobody has ever demonstrated a "cell," or a "germ" in the material, either with or without the aid of the most powerful microscopes, or with any other treatment, physical or chemical.*

As it can be procured from syphilitic sores the virus is always blended with other products of the decay of tissue, and has, perhaps, never been completely isolated. In as clear a state as I have ever been able to obtain it, it presents to my eye, under a fair microscope (Ross, London) a homogeneous aspect all the time ; not a "cell," or "germ," or "granule" was ever found, except such as are common to all sores, or suppurations. It appears, in fact, to be a homogeneous albuminous fluid, not at all unlike the "lymph" in small-pox, or vaccine pustules, plus common products of decay.

These facts and considerations forced me to abandon the "germ" concept concerning it.

But still the facts in regard to the fluid, or so-called "virus" of syphilis remained, and must be explained, or I must drop back into the old grooves again. The syphilitic fluid was a fact, as much so as that of small-pox, or vaccinæ ; and inoculation was a fact ; and the sequelæ

* A very recent European authority claims to have demonstrated the presence of "granules" in the virus of syphilis, and that its power for mischief in the living body resides in them.

were facts, that have occurred for centuries, and will probably recur for centuries to come.

What is the material of the "syphilitic virus"? what are its sources? and what is its chemical character?

The material is identical with that of living flesh, or possibly of the material of food arrested in its path to living flesh,* though the fact that the virus contains no pus globules must be received as evidence that its source is living tissue, or the materials of tissue, on its downward and outward career of organization. It is certainly from one, or the other, or partly from both; and it seems probable that it is at times from either or both; and if so, would account satisfactorily for the difference of results, which has led to the hypothesis of the "duality"—the double nature of the virus, as determined by the differences of results in different living bodies, *i. e.*, the soft and hard chancre, so called.

It is a matter for remark that in a large number of works on the subject I have consulted, no description of the physical appearances of the so-called syphilitic virus can be found, either as seen by the naked eye, or under the microscope. Descriptions of the appearance of the "sores" and "eruptions," "mucous patches," "buboes," etc.,—all modifications of the natural physical

* Prof. Saulsbury, of Ohio, verified by the subsequent researches of Dr. Losterfer, of Vienna, has demonstrated the existence in the blood of some persons, under the influence of the syphilitic virus, of what Saulsbury calls "syphilis corpuscles," but not named by Losterfer, who only claimed that he could, and did, by their presence or absence, determine syphilitic from the blood of uninfected persons, without knowing anything of its source. The discovery of Saulsbury was, and is, wholly neglected; while that of Losterfer was denied by some of his cotemporaries, and in subsequent tests failed. It is probably certain both parties described what they actually saw under high microscopic powers. Had there been, or were there now, any "specificity" in syphilis, then appearances would be uniform in the blood of all infected persons. Efforts were made to fix the shapes and dimensions of "cancer cells," with like failure. As there can be no "specificity" in the ever changing forms of material in organic life, all efforts to fix them with exactness must of necessity fail, as they have failed in regard to syphilis and cancer.

appearances of the tissues—are abundant, with plenty of illustrations, plain and colored.

Simon (*Chemistry of Man*) states, that the syphilitic virus contains no pus globules; and beyond this brief allusion to its physical character—and nothing in regard to its chemical constitution—I have been unable to find anything in systematic works, or in organic chemistry, on the subject.

Exact statements in these respects are certainly very desirable, though not of sufficient importance to arrest further investigation until they are supplied, for the virus is certainly an albuminous fluid, or lymph, containing nitrogen, sulphur and phosphorus, difficult to isolate, certainly so in my observations, for chemical treatment, or observation and experiment.

Its exact chemical structure is, therefore, for the present, more or less shrouded in mystery; though its solution is merely a question of time. And by its chemical nature is meant, not alone its ultimate elements, for these are probably well known, but something of the mode in which they are combined in the virus. Hitherto attention has mostly been directed to the study of its morphological changes, but its chemistry must sooner or later engage attention, when its mystery will be cleared up.

The important fact in regard to it is that in its chemical complexity it stores up a mode of force, statical, possible or passive; which in living human bodies, becomes force dynamical, active or actual; expended chiefly in modifying, changing, or destroying the special molecular arrangement of material, or “the forms of organic structure,” in living bodies on which natural function depends. And as they are modified, changed or lost, so is function changed, modified or lost. And the sole difference between the virus of syphilis or of gonorrhœa, as well as that of small-pox, and the whole catalogue of so-called “eruptive fevers,” as well as that of “cutaneous diseases,” is their speed and the extent to which they modify, change or obliterate the natural molecular

arrangement of material in living tissue. And just now clinical observers and pathologists are working out the extent of the changes effected by it in nerve tissue and viscera.

The sharply defined line heretofore separating physiology from pathology is being slowly but surely obliterated. The very titles of some recent works are indicative of this change, viz., *Pathological Histology*, *i. e.*, the formation and development of abnormal organic textures. And the changes of the structural arrangement of material in living bodies, now designated and studied as "organic diseases," are declared by Rindfleisch to be "precisely similar to those which occur as a consequence of age."* That which is now studied as a separate block of knowledge under the name of pathology, once brought fairly within the acknowledged domain of physiology, it may be only on its outer borders, the restraints and hindrances to the study of morphology on its naked facts will disappear, and the new order of things will certainly clear up many now obscure points in so-called pathology, and syphilis certainly be one of them.

Such, it seems to me, after careful examination, are the naked facts, as now understood and taught by the profession in regard to the material of the virus of syphilis, so called; its sources, and its chemical and physical characters. Not much of a showing, to be sure, but nevertheless, just what there is to show, on the changes which it effects in living tissue—human tissue—and it must be remembered that it makes none on dead tissue, nor anywhere else in organic life, except in monkeys, and through them a few inferior animals, and "therapeutics," the literature of the profession, is full and extensive.

What is the virus of syphilis? and, placed in contact with living tissue, what does it do, and how does it do it? It is composed of the material of the body or bodies of those from whom it is derived. There is no other source

* Rindfleisch, *Path. Hist.*, New Syd. Soc., p. 2.

from whence it can come or be derived. In its peculiar chemical condition, it stores up force, which, when introduced into other living human bodies, hypodermically, changes or modifies the molecular arrangement of their materials, as well as physical contour, followed by modifications of function, and remotely by loss of natural structural arrangement of material or "forms of organic structure," and consequently, loss of function and death.

That is, in my estimation, a technical though provisional definition of the so-called syphilitic virus, which includes everything pertaining to its material, chemical nature, and results, when introduced into a living body for the first time, and allowed to do its work without check or restraint from remedial agents, management, or mode of life.

In the study of what it is, what it does, and how it does it, if attention is confined to it alone, without reference to similar phenomena elsewhere in organic nature, correct solutions of its problems are not likely to be reached; for the mode of operation of the syphilitic virus in living bodies is not *sui generis*, nor alone, but takes place in obedience to well defined laws; and is precisely analogous to many other processes in both the vegetable and animal realms of nature. Pollen, in the vegetable world, is an analogous substance, storing up force in its material, which, applied under certain conditions, modifies organic structures in growing vegetables. "Crossing" breeds, illustrates, in animal life, the power ordinary inorganic material in special organized conditions has of storing up force to modify subsequent organic structures. Reproduction, multiplication, and perpetuation of organic life, animal and vegetable, is all based on, and actually accomplished, by force "stored up" in material, to form, modify or change existing, or growing, or forming organic structures.*

* Force stored up. Perhaps it may aid in comprehending the conditions of force to state, that nothing is known of force except in two states, viz., force statical, or force potential, or force possible, or force passive,

It may not be unprofitable to study the work of a virus, so called, in modifying the structural arrangement of materials in living bodies, having simpler conditions than that of the syphilitic virus. Most of us in civilized life now-a-days, have both "to do and suffer" the simple operation and results of vaccination. A little clean albu-

stored up in material; to become, with chemical changes of structure, or mechanical changes of position or structure, force dynamical, or force actual, or force active.

Thus: a piece of coal or wood, such as is ordinarily used as fuel, is material storing up force potential, or force possible, or force passive; to become, by combustion, which is simply chemical changes in its materials, *i. e.*, chemical decomposition, which force possible, potential or passive becomes, in the act of chemical decomposition, or combustion in the materials in which it is stored up, force dynamical, or force actual, or force active *i. e.*, heat, or simply motion by matter. And this applies to all force and to all matter, inorganic or organic. Chemically complex organic materials store up force potential, possible, or passive; to become, under certain conditions, force dynamical, actual, or active. I think this applies to organic structures themselves as fully as it applies to a piece of coal or wood, and that the evidence to this effect is as complete as it is possible for demonstration to make it. Each special structure, histologically, stores up force potential, possible or passive, to become, by decay, physiological or pathological, force dynamical, actual or active; and the force stored up in living organic tissues, when it is changed from force potential, possible or passive, into force dynamical, actual or active, is what is called "function" in organic life.

Chemical changes in brain matter, modified or changed in the structural arrangement of material, is announced or made known by changes of function. Mental equilibrium gives place to delirium, or the reverse, coma; or, again, to what is called insanity, dementia, or paralysis, etc., etc.

And it applies to medicines. Medicines, drugs and medicines, are materials, storing up, in virtue of special molecular arrangement of matter, force potential, possible, or passive, or statical; to become, when introduced into living bodies, force dynamical, actual, or active; and is manifested by advancing, modifying, or retarding the rate or pace of molecular changes in the materials of living tissue; and not in the twenty to forty different modes designated in existing classifications of medicinal agents.

Thus: alcohol does not "stimulate," *i. e.*, advance the pace of molecular work, or changes in the materials of living flesh. On the contrary, the decline of temperature in most cases following its introduction into a living body, demonstrates that the speed of molecular work is retarded, and the changed or modified functions equally demonstrate that structure, and motion in structure, have been modified.

minous lymph on the point of a lancet, knife or needle ; a few scratches of the skin, just sufficient to penetrate the cuticle, and the operation is complete. In forty-eight hours a reddish spot appears at the place of introduction, if the material, operation, and individual operated on, has been right—unprotected. At the expiration of a hundred hours a decided change has occurred, not alone at the spot of introduction, but the whole body participates in it. There is some elevation of temperature of the whole body ; and at the point of introduction an opaque spot, whitish, surrounded by a zone of redness, more or less marked. At the end of two hundred hours, a distinct pustule has arrived at maturity, filled with a clear lymph, which speedily becomes flocculent, desiccates, forming a dark brownish crust, which may be detached, or falls off, between the twelfth and eighteenth days after the introduction of the virus or matter. At the spot on which the crust or scab had formed, there is left a more or less decided excavation in the skin, upon which crusts successively form, as they are detached, until the final healing takes place ; and at the end of from four to six weeks, or in some cases longer, the color of the skin has become natural. But there has been left a scar or mark, more or less circular, or it may be altogether irregular, with a number of small pits or excavations in it. And the object generally of this proceeding is to gain immunity from the effects of another virus called small-pox.

This picture represents only "straight" or normal cases. And it must be borne in mind that such are comparatively rare or few in number ; for there are endless variations in the amount of constitutional disturbance, progress of pustule, and scars resulting, after the operation of vaccination. The operation may have other purposes than protection against small-pox, viz., to hurry up the progress of so-called whooping cough, indolent enlargements, etc. Nor is it altogether free from serious consequences. Within my own scope of observation,

death has ensued a good many times as a sequel to vaccination. These results were explained by the assumption that "impure" matter had been used, or the person was of a "scrofulous habit," etc. These are now regarded as conclusions drawn from erroneous premises, as I hope to be able to show before I get through with the subject.

After vaccination has been successfully accomplished, in a large majority of cases, but not all, small-pox lymph, and vaccine lymph may be introduced into the body with impunity, or at least without noticeable results, for a length of time somewhat variable, sometimes through life.

What has taken place in the body of a human person successfully vaccinated? What is vaccine lymph? In seeking a solution to the question, What is vaccine lymph? it is not needful to assume anything as a starting point, nor anything in regard to its containing "germs" or "organisms." Better to study it and its consequences in the living body on their facts. Vaccine lymph, like syphilitic lymph, small-pox lymph, etc., is identical in material with the material of the body from which it has been derived, and differs from all other fluids of the body only in the molecular arrangement of materials. Chemical complexity, everywhere and under all circumstances, stores up force, statical or passive; surrounding materials and conditions determining the character and extent of the modifications it will effect in them when it becomes force actual or active. Thus, the stored up force in the lymphs or viruses, which, in living bodies, gives rise to the several phenomena of small-pox, vaccine and syphilis, would appear elsewhere in nature as heat only. The changes effected on the exterior of living bodies by the small-pox and syphilitic viruses are obvious enough. What has occurred in the interior is not quite so plain, though it is absolutely certain that it is in the molecular arrangement of materials. From the activity of the processes in some of them, as small-pox, as evidenced by increased heat of body, the molecular

changes may be brought about in some such a way as a small flame applied to a sheet of cotton batting communicates its own mode of motion to the whole mass. Flame is force actual, active, which has been stored up in the materials undergoing combustion. Cotton stores up force potential, or passive, or statical, which becomes actual, or dynamical, in the act of combustion. Flame applied to cotton propagates itself by actual contact. Therefore, flame, cotton and contact are conditions for changing the molecular arrangement of materials in cotton. Cotton cannot be burned, or charred, twice, until the materials disintegrated are recombined again. So, of the results of vaccination, small-pox, etc., in living tissue. What has been done once cannot be repeated until the tissues have been remodeled again, so to speak. And but too often in living bodies the molecular arrangement of material has been, like the burned cotton, wholly lost, function abolished followed by death. For there is no greater certainty connected with the problem of life than that function is dependent on the special molecular arrangement of material in each organic tissue or viscus; and as this is modified, changed or lost, so is function modified, changed or lost; and for certain structures that is death to the whole organism.

Vaccine lymph, as an ordinary result, does not effect such changes in the molecular arrangement of the materials of living structure as to perceptibly change function; for if it did it would not hold its place a moment among remedial or prophylactic measures.

That such is the *modus operandi* of the virus or lymph producing the several phenomena called vaccination, small-pox, gonorrhœa and syphilis, is shown in many ways, as the acceleration of the general movement of material—fever—during their progress, as evidenced by the clinical thermometer, by the changes in the appearance of the cuticle and cutis beneath, at points of entrance or pustules, where the entrance has been hypodermically effected, and at other points, and eruptions, etc., elsewhere.

As all organic life, animal and vegetable, is made of one stuff, information may be very properly sought among the simpler forms of vegetable life, to throw light upon the complexities of animal life. Thus, something may be learned in regard to "storing up" force for special and definite purposes from the vegetable world. A vegetable seed is—

- 1st. The necessary material ;
- 2nd. To store up the requisite force ;
- 3rd. To form the structures of the new plant up to the point of independent existence ; or the appropriation of inorganic material to its further growth and evolution.

Coming back again into the domain of animal life, the egg furnishes another striking illustration of "storing up force" in the requisite material for exactly like purposes as a vegetable seed, except that the young animal, after entering its stage of independent existence, requires organized material, in certain chemical conditions, for its further growth and evolution, but always "germinal matter," *i. e.*, material in which some previous animal or vegetable existence had "stored up" the material and force for its own preservation, perpetuation or multiplication.

The real difference between small-pox, vaccination, syphilis and gonorrhœa—and in the same class are included scarlet fever, measles, whooping cough, and the whole catalogue of "skin diseases"—is not "specificity," but mode and speed in changing the molecular arrangement of the materials of living tissue. And the mortality attending the processes of each follows very closely the speed, as determined by the temperature.

Small-pox, scarlet fever and measles, which are accompanied by the highest ranges of temperature, and, therefore, the highest speed, have the largest death rate. Thus, vaccination has a not very variable speed, its work in a living body being accomplished in something near a month of time, seldom less, often more. Small-pox has

a higher speed and longer duration, extending over nearly or quite three months. Measles, apparently shorter, yet the disturbance of temperature extends over one to three months. Scarlet fever has, perhaps, the highest speed, and extends over two or more months. Whooping cough slower than either, extending, at times, over a whole year, as determined by changed functions. Syphilis and gonorrhea have a still slower speed, with indefinite duration, syphilis, in many instances, extending over the remainder of life.

At certain stages, the temperature of syphilis, as well as of gonorrhœa, is from three to five degrees above natural; but in the main is nearly or wholly natural, though the change in the molecular arrangement of structure still proceeds, as definitely demonstrated by changing functions, and physical appearances of structure, within the scope of vision.

The whole catalogue of "chronic," *i. e.*, slow moving, "skin diseases," eczema, prurigo, etc., are characterized by little or no disturbance of temperature, and are, therefore, of indefinite duration, and have many very close points of resemblance to syphilis. It is, therefore, apparent from even a casual study of the phenomena of these several so-called "diseases," that they are due to modes of force, and the velocity at which they act, rather than to "specificity," or any essential difference in materials, or the force concerned in their movements.

The so-called "syphilitic virus," it seems to me, has been shown to be material identical with that of the living body from which it is taken, and differs in no respect from other fluids, or any special fluid, of an uninfected body, than in the molecular arrangement or structure of its material. That in this special molecular arrangement of material, there is stored up force statical, potential, or passive, which, when introduced into an uninfected living body, may become force dynamical, actual or active, communicating its own mode of motion, or, perhaps, more properly speaking, modifies the movement of material on its path

to living flesh, with the result of forming, so to speak, syphilitic tissue, which differs very widely from normal tissue in living human bodies.

I find little difficulty in getting a conception of how it is done, by studying other phenomena, chemical and dynamical, in the inorganic as well as organic realms of nature. Everywhere, bringing together two separate materials, storing up in their chemical complexity force statical, possible or passive, under certain conditions to become force dynamical, actual or active, if there exist any chemical affinities between them, the result is a *tertium quid*, a third something, having no resemblance, physically, to either of its component parts. Thus, in colors, blue and yellow combined in certain proportions, form green. Sulphuric acid and oxide of iron, one a fluid, the other a solid, united, form a third something which presents none of the physical appearances of either of its constituents. Among organic materials such results are still more striking, as in photography. Coal tar, crude opium, Peruvian bark and alcohol by chemical manipulation yield the most varied results. But my favorite conception, based on the unstable chemical states of the materials actually composing living bodies, and the so-called syphilitic virus, is a minute flame applied to a mass of fleecy cotton, with the single modification in the matter of speed; the cotton burning rapidly, in that respect resembling scarlet fever; while the work of syphilis goes on at a snail's pace; and when unmolested by treatment, or other external conditions, ceasing only when it has "no more worlds to conquer," no more tissue to disarrange.

The results, too, of remedial proceedings are very properly regarded as shedding some light on the problem. Medicines are materials, organic or inorganic, storing up force in themselves—*i. e.*, in their chemical complexity, or, molecular arrangement of material—which, in living bodies, have no other influence than a partial control over the physical movements of materials, as they ascend

to or descend from their condition in living flesh. And this within a very narrow range, for if the physical movement of material is advanced beyond a definite limit, as with strychnia, or retarded below an equally definite limit, as with prussic acid, they are ranked as "poisons." Others, again, operating beyond these limits in advancing motion of materials, are regarded as "caustics"; or below, as "anæsthetics," or "poisons." These, and other like operating medicines, are ordinarily composed of materials natural to the body, in other and widely different states of chemical union. But materials altogether foreign to the tissues of living bodies, as iodine, arsenic, mercury, etc., in various combinations, like complex organizations of materials natural to them, may appear to advance, retard or modify the physical motions of materials composing them; but, in reality, universally, and necessarily, acting always in the interest of waste of existing tissue, and increase of the speed of eliminating effete products and material. Whether the ultimate results are in the interest of repair or waste, depends somewhat on quantity introduced in a given time, and condition of motion in materials of structures, thus, sometimes doing what is deemed desirable work, at others effecting changes not only not desirable, but actually damaging.

The leading therapeutic agents for the remedial management of syphilis are mercury, potassium iodide, caustics, salines, natural saline mineral waters, to which may be added, though not so recognized, hard labor in the open air. Or sometimes agents operating exactly the reverse, as iron, quinia, bismuth, mineral acids, and many other so-called tonics, etc., etc.

Now what do these several agencies do? Mercury, confessedly first in importance on the list, is an agent of tissue waste *per se*; is material altogether foreign to the tissues of the human body, and in the laboratory of life, so to speak, its force statical, or passive, is displayed as force actual or active, first, last, and all the time, in

the interest of increased waste of living tissue, without much disturbance of temperature, and hence, is classed as an "alterative." There is, of course, a complex play of chemical affinities, as the result of the new conditions it introduces, difficult, and not now possible, to explain in detail; but the increased waste of existing tissue is the fundamental and important fact and result. And that is the precise reason why actual working practitioners, after experimenting unsuccessfully with other remedial agencies, invariably return to this imperfectly understood, but, in the main, certain working agency, in their hands. For persons in otherwise good health, not engaged in hard wasting labor, it is the *sine qua non* of remedial management, if success is aimed at.

Potassium iodide, the second on the list in importance, is, like mercury in one respect, half and half a foreigner to the tissues of the body, yet in good company, for the potash is a natural and essential constituent of living tissue; one of whose uses is to become a sort of vehicle, or car, to convey the results of interstitial decay of the tissues to their appointed places of egress from the body. Iodine, however, like mercury, is a wasting agent, *per se*, though operating slower. For persons in whom tissue making and repair is below par, it very properly takes the place of mercury in any of its various combinations.

Then come the salines—wasting agents, but essential constituents of living tissue in definite proportions. Introduced in excess, they become wasting agents, with less power than mercury or iodine, with the exception of tartar emetic. Sea voyages, natural mineral waters, travel, etc., etc., are auxiliaries, indispensable under some conditions, in remedial management of syphilis, viz., when the processes of waste and repair are performed too sluggishly. Caustics, too—agents whose force, statical, passive, or stored up, when applied to living structure, is manifested as force, actual or active, too rapid to preserve forms of organic structure, which are accordingly lost—have their place and uses in the

remedial management of so-called syphilis; and are essential adjuncts of effective treatment to break up, and secure the complete disintegration of tissue altogether out of natural structural forms; a necessary procedure to save the lymphatic system, whose function will be explained presently.

Neglected or not understood remedial agencies, are hard labor in the open air, exposed to the sun and weather.*

There is no more efficient ally of the syphilitic force dynamical, or actual, in the living body, than sedentary habits of life; for, in such, there is no proper rate of waste and elimination kept up; so that the work of changing forms of organic structure goes on without much opposition.

Then, again, there are conditions of living bodies in whom the work of repair is reduced to its minimum; while the rate of waste is in excess of even that of normal repair, in which the so-called tonics, agents which, in their stored up, or statical force, supplement, as it were, the deficient natural forces of repair, are not only demanded, but are essential to recovery, or continued life.†

* Dr. Alfred Ball, Surgeon of U. S. Volunteers, during the late war, informed me that when the soldiers lay in camp any length of time, he would soon have a large number of cases of syphilis on hand. Orders to march, especially if the duty and exposure were severe, was invariably followed, not by relief, but apparently good recoveries. In his own language, "We never heard much of syphilis during long and severe duty, but whenever we went into camp they were sure to turn up. But the cases that appeared in camp were not relapses from former conditions, but were new cases." Hard duty seemed to relieve them as if by magic.

† Syphilization, originally suggested by Turenne's experiments on inferior animals with the virus of syphilis, was, perhaps, first carried into actual clinical practice by Sperino, of Turin. Prof. Boeck, of Sweden, while traveling in Italy in 1851, had his attention drawn to the results of Sperino's practice; and has, since that time, devoted himself assiduously to the subject at his home in Christina, and is now the leading authority in regard to it. Though in his hands, as it had been in Sperino's, it was a strictly empirical clinical measure, it is an effort in the right direction, and has a

It is thus seen that the employment of remedial agencies comes under the dominion of definite laws. Mistakes may be, and perhaps are, habitually made by the most expert prescribers, but the fault is not in the

solid, scientific basis. Its aim is to "saturate," so to speak, the system, and to attain by repeated inoculations, the end actually accomplished by the virus of vaccinae, as well as those of small-pox, scarlet fever, measles, etc., *i. e.*, "protection," or "immunity," from future effects of these viruses after one "attack."

What syphilization really accomplishes, it seems to me, is to get up, and keep up, the requisite speed, and mode of "changing molecular forms of structure of living-bodies," at which they are not essentially damaged during the process, *i. e.*, admitting the future performance of function, not perceptibly unnatural, as after small-pox, vaccination, etc., etc.

It seems to me that the results attending or rather succeeding the introduction of vaccine virus in unprotected persons, or persons into whose bodies it has never been previously introduced, who are suffering from whooping cough, at certain stages of the complaint, points out the ultimatum of the clinical management of syphilis. That vaccine virus, which has a definite, and not very variable speed, in doing its work in the living body, communicates its own speed to whooping cough, which has no definite speed, like syphilis, so that when the work of the vaccine virus is complete, the whooping cough has ceased, I have verified, again and again, during my professional career. In fact, it is one of our most certain clinical measures in whooping cough, at particular stages. But we are not without some positive clinical evidence on the point I wish to make, *viz.*, that syphilis can be hurried through its stages, so as to save the structures, and gain immunity from it in the same way as small-pox, measles, etc., are self-protective. Thus: Prof. P. J. Farnsworth, of Clinton, Iowa, reports (*Cin. Med. News*, Dec., 1874, pp. 556,) a case of a gentleman who had the "copper discoloration of skin, loss of hair, pains in the bones," etc., who, while under treatment for "secondary" syphilis with no encouraging success, had the peculiar eruption of small-pox suddenly make its appearance, and pass through its stages in a mild form. When he had recovered from the small-pox, all traces of syphilis had disappeared. Twelve years later he saw the patient, who had subsequently married, and had offspring, with no evidence of syphilitic taint in either himself, wife or children. Here, small-pox had communicated its own rate of speed to syphilis, so to speak, both ending at the same time, without material damage to structure, as evidenced by his subsequent life during twelve years.

It seems to me, therefore, that the ultimatum of the clinical management of syphilis, will be by some mode of "force," "stored up," which will hurry it through its stages in the briefest possible time, and thus make it self-limited, and self-protecting, as small-pox, measles, etc.; and when seriously sought after, will, sooner or later, most likely, be found. The

absence of, nor in the variation of law, but imperfections of the prescriber in interpreting the actual condition of patients, behind the objective symptomatology presented for his study. Still, when conditions are more conspicu-

most successful clinical management is better explained in this way than any other now known, as will be shown by and by, when its clinical management comes under notice.

Sir Wm. Jenner, in his just published address on taking the Chair of the Clinical Society of London, (*Med. Times and Gazette*, Feb. 20, 1875,) says: "When any acute specific disease is epidemic, the public—the educated public—call loudly for a cure; and too often, I think, members of the profession call out as loudly, 'Eureka!' Now it seems to me that there are no grounds for expecting that a cure will ever be found for diseases of this class—(small-pox, measles, scarlet fever, etc.)—*i. e.*, for expecting that a drug or medicinal agent will be discovered, capable of arresting the progress of the organic changes which, set in motion by a special cause, and following each other in definite and ascertained order, constitute what we call an acute specific disease. For, in place of being diseased actions, these several organic changes, the evidence of which we call symptoms, are, as far as our present knowledge extends, processes, the first of which being called into action by some external cause—*e. g.*, the poison of the disease—are essential for the restoration of the intimate organic changes to the order and intensity which constitute health.

"I may illustrate my meaning thus:—Each of these diseases may be likened to a single fit of ague. We administer drugs to prevent the recurrence of the fit, but we do not cure the fit itself; the cold stage having commenced, and attained a certain intensity, the hot and sweating stages are essential for the restoration of the balance of health. So with small-pox. By vaccination we prevent its occurrence; but when the first of the phenomena, which, following each other in certain and definite order, constitute an attack of small-pox, occurs, we know that there is no road to health, but by the sequence of changes the symptoms of which mark the several stages of the disease; and to my mind it is very questionable whether if it were possible, by the administration of a drug, to arrest the essential changes which constitute any of these stages, health would be the result. And what is true of small-pox in this particular, seems to me to be equally true of all the acute specific diseases."

Sir Wm. does not include syphilis among "acute specific diseases," perhaps, because its course is so slow—left to itself, or imperfectly treated. But it falls in the same category, and when any mode of "stored up force" becomes available to hurry it through its changes in a definite and limited time, then will therapeutics be the master, which it falls very short of being now.

I well remember the disgust excited in my mind by Prof. Boeck's practice of syphilization, when I first read about it, twenty years ago. Syphilis

ously studied instead of "the disease," and "stages of the disease," there will be fewer blunders.

The purpose behind any and all remedial agencies can be clearly and definitely stated. In order, however, that they may be more clearly comprehended, it may be well to review the phenomena in the light in which they have been presented.

The train of phenomena called syphilis is brought about by the introduction into an uninfected living human body, hypodermically, of material, in such a state of molecular organization, as to store up force—statical, potential, possible, or passive—to become force dynamical, or force actual, or active, for its own multiplication and perpetuation amidst the complex materials of living human bodies, and thus effecting modifications of, or completely changing the structural arrangement of materials, on which natural function depends, in the various organic structures composing an individual living human body.

Unless purposely and knowingly inserted, the fact of the introduction of the syphilitic virus into a living human body by chance or accident, is, and can only be known, by changes, or modifications of structure, generally, though not always, at the point of its introduc-

seemed to me to be the most loathsome of all "diseases," and the idea of multiplying and perpetuating it in that way in living bodies, seemed to me to be the very height of absurdity, if not actually criminal. I then gave Prof. Boeck and his syphilization a most hearty and unqualified condemnation. But since I have been "re-constructed," medically, he, and his practice, appear in a very different light. Syphilis is not more loathsome at any stage than small-pox, and if it had the speed and limited duration of small-pox would cease to be a puzzle to actual working practitioners, who have to deal with it, just as small-pox has. But the therapeutic problems in the two cases are exactly opposite to each other. In the remedial management of small-pox, practitioners are more concerned in slowing its speed than with any other feature, while in syphilis the problem is to hurry up speed. This, syphilization does to some extent, but its nine to twelve months duration is too slow for the present state of civilization. Vaccination out of the way, the small-pox virus might become the "specific" of syphilitic treatment, as quinia is of ague. But vaccination, as now insisted on in early life, blots this chance out at later periods.

tion; first, the chancre, and certainly there can be but one conclusion as to whether a chancre can exist without changes in, or a total loss of, the structural arrangement of material in living tissue. For these must occur that a chancre, so called, can have an existence. Here comes in the caustic and mercurial treatment, whose object is to "stamp out," so to speak, the multiplying capacity of this special material; and if accomplished before the lymphatic system has become deranged, the relief, or restoration to normal condition again of the body, is complete at once. But, as often happens, the lymphatic system becomes involved, and then modifications of tissues having the highest rates of repair and waste, as the skin and mucous membranes, speedily occur, and they no longer present natural objective appearances. Sometimes the lymphatic system is overwhelmed at the initial point, and the result is, the glands nearest to the local point of introduction lose completely structural forms, repair is wholly arrested, waste goes on at a pace too fast to allow the debris to be removed by natural means and through natural channels, and suppurations, so called, are established, and the tissue of the gland is speedily broken up.

The order of the disarrangement of the tissues will be in the order of their stability, and the velocity of repair and waste in them. After the skin and mucous membrane, and lymphatic glands, the "mother of bone"—the periosteum—next shows departures from natural structural arrangement, followed in due time by permanent changes in the bones themselves; first noticed about points only covered by cutaneous tissue, though not likely confined to them; then, the smaller and softer bones about the nose; then, the interior structures of the globe of the eyes; and finally, the central mass and connections of the nervous matter—the brain and nerve masses and viscera—each succeeding modification, or loss of structural arrangement of matter, announced by changed or lost functions and physical appearances. Now, how are these modifications of the structural forms of the mate-

rials of living bodies brought about? Not by a "disease," but by adequate means to these ends; by force, passive, stored up in material, becoming force active, actual, or dynamical, in the midst of the chemical decompositions and recompositions certainly and ceaselessly taking place in human bodies, alive or dead.*

Living tissues, in detail, as well as in the total of each individual, are perpetuated from new material in obedience to orderly law, precisely analogous to the mode in which plants are perpetuated in the vegetable realm of nature, and not by a special police, or constabulatory force, as it were, in the so-called "vital force," the hypothetical means to which their preservation and perpetuation have been referred for so many centuries.

How are they multiplied and perpetuated? Precisely as wheat and corn, and all other vegetables, are multiplied and perpetuated—*i. e.*, by force stored up in material for that purpose, in the act of final decay in the performance of function, *i. e.*, a seed. But, in living animal bodies, the material in which the various structures store up the force for their own perpetuation, as they are disintegrated in the performance of their functions, it is the duty, or function of the lymphatic system to collect, and separate from the general debris of the structures, and unite it with the ingoing stream of new material, to make good the waste of structure in the performance of function. This is done just before the stream of ingoing material enters the right auricle on its way to the lungs. In the lungs this complex stream meets the inhaled gaseous atmosphere, when and there the physical, chemical or molecular changes as they may by preference be called,

* Thirty years since, my only sister died at the age of 21, quite suddenly, and therefore her body was not much changed from its nearly physical perfection during life, at her burial. The ground of the cemetery is now demanded for other uses. Opening her grave two weeks since, nothing was found, except portions of her osseous system, only dark lines in the soil, indicating the outlines of her burial case. The materials of her body got no rest in the grave, as they had had none during life.

take place which fits new material to become living flesh, capable of performing a function, chief among which is providing for their own reproduction and perpetuation from new material, as wasted in the act of functional decay. Whatever there is of "vital force" concerned in life, and living beings as complex as the human body, is to be looked for, and found, in the lymph; and, in the vegetable world, the "seed."

This understanding—explanation—of function, and play of matter and force, at once satisfies all scientific and moral requirements in accounting for all the actual phenomena of life, viz., personal identity, with changing material through life; and the physical death of the parent is a necessity that offspring may have individuality. It satisfactorily accounts for certain so-called "diseases," as scrofula, phthisis; tumors, from adipose to cancer; and for the physiological—histological and pathological—histological facts of normal life, and post mortem states of the tissues.

From these facts and considerations, and the inductions to which they necessarily lead, in regard to histogenesis and histolysis—play of matter and force in living bodies—it is not difficult to lay down general principles to guide the actual working practitioner in the remedial management of so-called syphilis, enough of detail being left to him to tax the best possible mental powers of each and every one.

They are as follows :

1st. For all in whom the processes of repair and waste of living structures is at its maximum, or standard of health, or near that, and in whose bodies there are certain structures, which have been so modified by the so-called virus of syphilis as to be incapable of performing natural functions, the indications are to waste them as rapidly as can be done without too much disturbance of the processes of repair.

To meet this indication, mercury in some form is the leading remedial agent, and most effective in vapor to the cutaneous surfaces.

2nd. With decreased and decreasing capacities for normal repair, mercury cannot be as safely employed as the potassium iodide, and salines.

3rd. When repair is manifestly below the normal standard, as evidenced by loss of appetite, weakness, and pallor of cutaneous surface, resort must be had to a mixed treatment, as potassium iodide in combination with so-called tonics; among which quinia will always hold a leading place, iron, bismuth, strychnia; and barks having peculiar properties—that is, storing up force particularly adapted to supplement the natural powers and capacity for repair, as columbo, gentian, black alder, prickly ash, poplar, cundurango, eucalyptus, etc., including cod oil.

4th. Where repair is much below the requisite pace, all wasting agencies must be laid aside, and all available means, hygienic and therapeutic, brought to bear to bring up repair as nearly as possible to the natural standard.

5th. In every condition, good food and every sanitary measure must be properly looked after. For living structures are not made out of nothing, but from the food eaten, and its character much influenced by surrounding conditions.

Previous and present health, occupation, situation in social life, etc., will have much to do, not only with diagnosis, but especially with prognosis, and consequently with remedial management. Active, hardy men and women, in young or middle life, will fare better, with and without treatment, than the sedentary, indolent, and poorly provided for, of whatever stations in life.

The purpose and aim of this memoir is to show that what is called and known as syphilis, can be understood in its entirety, viz., what is its cause, physical, chemical and dynamical; what it does in living human bodies, and how it is done; what remedial measures are proper in each individual case; what are improper; and that these things can be definitely stated, and definitely understood, without the scholastic furniture with which our books now clothe and surround it. And that the

actual working practitioner who can emancipate himself from the shackles of the nomenclature and ideals now held in regard to it—syphilis—and will study it on its own facts, and prescribe its remedial management based on separate studies of each individual case, can rarely fall into error, or if so, it can only be temporary, as the results of treatment will soon point out any errors in the mind work given to it in the beginning.

In closing, I wish to acknowledge my indebtedness to the authors of the published works on the subject, past and present. I recognize in them careful observers, and cautious experimenters, with rare descriptive powers. Viewing the phenomena of syphilis so differently from all of them, there seemed to me no place in the body of my monograph, where the obligations I am under to them, could be acknowledged, save just here.

ARTICLE III.

A CASE OF SUDDEN DEATH.

By NORMAN BRIDGE, M.D., CHICAGO.

Was called, Oct. 7, 1874, in the evening, to see Mrs. B.; stout English woman, æt. about thirty; mother of three children (and having had one miscarriage); seven months pregnant. Was thrown from a carriage a month ago, receiving injuries which, although trivial, made her an invalid a day or two. She considered herself afterwards fully recovered from the injury.

Three days ago she had a slight chill, followed by a little fever; next day a slight return was noted of these symptoms, and on the following day (yesterday) Dr. J. N. Chaffee prescribed for her a mixture of quinine and Fowler's solution, and another mixture containing opium, ipecac, and spts. eth. nit. I think she got in each dose of her quinine about three grains. She declared she had

not slept for two nights, and complained of severe pain all over—there were few or no real uterine pains. She was clearly a little delirious—"flighty." She complained of the want of effect of her medicine. She vomited everything she swallowed. Her pulse was 120 to 130. Considering myself called simply in an emergency, I gave her $\frac{1}{4}$ gr. morph. sul. on her tongue, and ordered R Chloral Hydrat., 3 jss; Syrup, 3 jv; Aquæ ad. 3 ij. M. S. Take 3 ij every half hour till sleep is procured. Charging that on the morrow the quinine mixture be resumed, and that the family doctor be sent for, the case was dismissed.

On the evening of the next day was sent for hurriedly. Found patient with much the same array of symptoms as on the previous visit, only there were more protestations of pain. Pulse 130; temperature $102\frac{1}{4}^{\circ}$ F. Only broken sleep had been procured the previous night with the chloral mixture, although more than half of it had been given.

The patient begged for drugs to make her sleep. Her stomach was quiet. One or two doses of the quinine mixture had been given during the day. Prescribed: R Chloral Hydrat., 3 iij; Morph. Sul., gr. j; Syrupi, 3 vj; Aquæ ad., 3 iij. M. S. Take 3 ij every half hour or hour for sleep.

At 10 A. M., 9th, found patient feeling much better; had slept some from two or three doses of the chloral mixture. Slight pain in head; no uterine pains; tongue coated a little (not previously); pulse 120, rather weaker than normal; bowels quiet, and urine plenty; temperature $99\frac{1}{4}^{\circ}$ F.; respirations, 28 per minute; mind perfectly tranquil and clear. Ordered the quinine mixture every three hours, and milk in abundance.

9th, evening. Complains of general pain in head; is "flighty" at times. Temp. $100\frac{1}{4}^{\circ}$ F.; pulse 125; respirations 24; tongue quite clean. Had taken a quart of milk. Finding myself compelled to retain charge of the case, I made careful examination of the chest and uterus. There

was puerile breathing over most of both lungs, but no other abnormality. The heart sounds were normal. The os uteri was firmly closed and flat. Could not detect the foetal heart beat. Ordered the quinine mixture to be given every three or four hours. A tablespoonful of castor oil to be given, and the chloral mixture to be given every hour, if necessary, to procure sleep.

The next morning, at 7.20 o'clock, the husband of the patient, sleeping beside her, was awakened to find her dead. He said he had given her four doses of the chloral, the last between twelve and one o'clock; that at two o'clock a dose of the quinine mixture was given; that she had seemed better, and sat up in bed and discussed with him household matters in the most natural way for an hour or more; that at five o'clock she had expressed herself as feeling sleepy, and desired to be allowed to sleep; that soon after he heard her breathe heavily (the room being dark), and asked her what was the matter, and she replied requesting him not to disturb her, as she was nearly asleep; that very soon she became quiet, and he, supposing she was sleeping, himself went to sleep, and that he was awakened at 7.20 A. M., and she was dead.

At 9 o'clock blood was oozing freely from the nose.

An autopsy was refused.

What killed the patient?

Is it fair to presume that the administration of the chloral had anything to do with the fatal issue of the case?

Progress in Medical Sciences.

ARTICLE I.

PROGRESS OF SURGERY.

By JNO. E. OWENS, M.D.,

LECTURER ON SURGERY, RUSH MEDICAL COLLEGE, CHICAGO.

1. Hæmorrhoids. By Mr. W. COLLES. (*Dublin Journal of Medical Science*, June, 1874; *Braithwaite's Retrospect*, Jan., 1875.)
2. Iodide of Potassium in the System. By Dr. T. L. BRUNTON. (*Practitioner*, London, June, 1874; *Braithwaite's Retrospect*, Jan., 1875.)
3. On the Surgical Treatment of Gluteal Aneurism. By TIMOTHY HOLMES, Esq. (*London Lancet*, July 11 and 18, 1874; *Braithwaite's Retrospect*, Jan., 1875.)
4. On the Surgical Treatment of Inguinal and Femoral Aneurism. By TIMOTHY HOLMES, Esq. (*Lancet*, Oct., 1874; *Med. Times & Gazette*, July, 1874; *Braithwaite's Retrospect*, Jan., 1875.)
5. A Case of Death from the Administration of Bichloride of Methylen. (*British Med. Journal*; *The Boston Med. & Surgical Journal*, Jan. 21, 1875.)

1. Internal hæmorrhoids are vascular growths, resembling a nævus in children, or erectile tissue in adults. They may be entirely destroyed by injecting into each hæmorrhoidal tumor about twenty minims of the ordinary tincture of iron, by means of a hypodermic syringe. To enable this to be done, the piles must be forced down, so as to be extruded. In a case thus treated, on examination four weeks afterwards, no trace of the piles could be discovered, except three nodules, each the size of a shriveled currant.

2. When iodide of potassium is swallowed, it is absorbed from the stomach, passes in the blood to the salivary glands, and is excreted by them much more readily than by the kidneys. It is, however, again and again absorbed and excreted, and does not get out of the system unless a purgative is given to cause its expulsion

from the bowels, before it can be reabsorbed. The same, says Dr. Brunton, is the case with the other iodides, such as those of lead and iron.

3. In the treatment of gluteal aneurism, present experience, says Dr. Holmes, points to the following conclusions :

a. Gluteal aneurisms, both traumatic and spontaneous, are very favorably circumstanced for the treatment by either rapid or gradual compression applied to the aorta or common iliac.

b. If this treatment does not succeed by itself, it may be supplemented by coagulating injection, or galvanopuncture, performed while the patient is narcotized, and the circulation commanded.

c. When such treatment fails, and particularly in aneurisms with imperfect or ruptured sacs, where it is not indicated, the internal iliac must be tied, when the surgeon thinks that he cannot find the artery outside the pelvis. But when the artery is accessible, the old operation, or the operation of Anel (the ligature of the affected artery as it approaches the tumor), should be practiced, according to the size and extent of the tumor.

d. The ligature of the internal iliac artery is liable to failure, in cases of spontaneous aneurism, from a diseased condition of the coats of the artery, and should always be avoided when other means of treatment are available.

4. On a review of the whole subject of femoral aneurism by the light of present experience, Prof. Holmes is led to the following conclusions :

a. That the operation of ligature of the external iliac artery has been, on the whole, fairly successful, as evidenced by a very small mortality in uncomplicated cases of hæmorrhage, and a mortality of about one-fourth in published cases of aneurism—a conclusion supported by the unpublished records of hospital practice, though there have been a few cases of recurrence of the aneurism.

b. That the operation on the superficial femoral, for

aneurism situated in Hunter's canal, is a very successful operation.

c. That the ligature of the common femoral is a perfectly justifiable operation ; though whether more or less trustworthy than that of the external iliac artery, we are not as yet in a position to judge.

d. That ruptured aneurism in the thigh has been treated with a large amount of success by the old operation (incision into the tumor, rapid removal of clots, ligature placed above and below the aneurism.)

e. That the ilio-femoral and femoral aneurisms have been treated with a very fair proportion of cures in the few instances on record, by rapid compression, applied to the aorta or common iliac, but that there is no evidence to show that this treatment is less dangerous or more successful than the operation on the external iliac artery, when the latter is feasible.

f. That compression, especially digital pressure, has been applied to the treatment of inguinal and femoral aneurism with striking success, though in what proportion of cases we do not as yet know. That the comparative ill-success of this method, in our hospital practice, is more calculated to raise doubts of the efficiency of the application than of the soundness of the method itself.

g. That in rare cases, direct pressure, or even manipulation, may be advantageous.*

h. The arterio-venous femoral aneurism should be treated by double compression, applied to the vein and artery : which failing, Mr. Spence's method of tying the artery above and below is the most hopeful measure ; and when this is impracticable, either the old operation should be preferred, or the case abandoned.

i. That spontaneous aneurisms of the profunda have been diagnosed, and successfully treated by compression.

* The object of "manipulation" is to alter the relations of the layers of fibrin in the aneurismal sac, in order to bring about a deposition of fibrin which becomes entangled in the projecting surfaces of the displaced laminae.

j. That recent traumatic aneurisms of branches of the external iliac or femoral, are best treated as wounds of these vessels—*i.e.*, either by compression or by ligature at the wounded part.*

5. The patient was suffering from caries of bone, near the lachrymal sac. Operation was determined on, and Mr. Buller administered bichloride of methylene, by means of a perforated leather inhaler, covered with flannel. Three drachms were inhaled, and in two minutes the breathing became stertorous. After the operation, the pulse at the wrist suddenly parted, and then the respiration ceased. All known means for restoring animation were employed.

Reports of Societies.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, March 22, 1875.

(Reported by RALPH E. STARKWEATHER, M.D.)

The Society met as usual, at the Grand Pacific Hotel, the President, Dr. John Bartlett, in the chair.

Dr. Etheridge, of the Section on Materia Medica and Therapeutics, presented a written report, of which the following is a summary:

SULPHIDE OF CARBON IN THE TREATMENT OF ATONIC ULCERS AND CHRONIC ULCERATION.

After adverting to the proverbial difficulty of successful treatment of ulcers, mention was made of their common features, namely, atony and chronicity, with a tendency

* See Mr. Holmes' conclusions as to the treatment of popliteal aneurism, (*Chicago Med. Journal*, Jan., 1875, p. 42.)

to extension and a total absence of reparative nature and cicatrization. The sulphide of carbon was used in ulcerations first in 1867, by M. Michel, while he was an interne in Saint Lazare. Its nauseous odor and its toxic action are the predominant characteristics, and have doubtless kept it from being extensively used.

By the German physicians, this agent has been employed in the treatment of neuralgias and arthralgias, probably because of its refrigerant and anæsthetic action. Compresses soaked in carbic sulphide in some aromatic essence were placed over the painful part, and renewed from time to time till relief followed. Its vapors mixed with those of iodine have been used in certain affections of the eye and ear. It has been used also upon the erysipelatous redness of chilblains.

Dr. Guillaumet also gives details of three cases of ulcers selected from a large number thus treated.

Case 1. Large ulceration of the right labium majorum of four and a half months duration, in a syphilitic subject. Cure in fifteen days.

Alice V., aged 23. Upon the inner aspect of the right labium there is a large ulceration, extending nearly its whole length, measuring about one and a quarter inches in breadth. It is atonic, has a grayish base, irregular serrated borders, and a depth of about one-fifth of an inch. The various treatment adopted by others was of no avail, the ulceration continued to spread. She came under observation four and a half months after the ulcer appeared. The sulphide of carbon was at once employed with gratifying success. Thirteen applications in fifteen days sufficed to produce complete cicatrization of the ulcer. After the first application of this agent there is no appreciable change in the aspect of the ulcer. Upon the fifth or sixth application, a sensible amelioration and a very rapid course of cicatrization followed. It is necessary to be careful in using the sulphide, because of its extreme volatility and nauseous odor. It may be applied as follows: The bottle containing pure sulphide

of carbon is held very near to the ulcer to be dressed ; a piece of charpie is soaked in the liquid and squeezed upon the mouth of the bottle to expel any excess of the drug ; then the piece of charpie is lightly and rapidly brushed over the surface of the ulcer which is immediately covered with a powder of bismuth subnitrate or of starch. The pain of the application is short, quick and very fugacious. The pain diminishes after a few applications have been made. As a rule, its intensity may be said to be in inverse ratio to the number of the dressings. The amount of the sulphide to be used should be proportional to the duration and vitality of the ulcer. If too much be used, cicatrization might be retarded.

Resume :

- I. Sulphide of carbon is a powerful cicatrizer.
- II. Its action is limited and rapid ; it is wholly local, and does not produce a single accident which follows the inhalation of its vapors.
- III. Its application is accompanied with pain, sometimes very severe—proportional to the susceptibility of the patient—but is of very short duration in most patients, followed immediately by a period of anæsthesia which is not constant.
- IV. Sulphide of carbon acts upon ulcers of various kinds (syphilitic, scrofulous, diphtheritic, etc.,) and changes them all beneficially.
- V. This is a valuable agent in the treatment of wounds or ulcers, presenting the common characteristics of atony and chronicity.

ERGOTINE.

Dr. E. R. Squibb speaks as follows of ergotine :

The existence of one or more active principles, which may be isolated for therapeutic use, has been very generally believed, hence various substances have been extracted and sold under the name of ergotine by different makers, the dose and properties being equally diverse. Dr. Squibb, however, explains that he does not believe that there is an active principle separable from ergot,

which in any proper sense represents the drug, and that there is no such thing as ergotine. Of course certain of its constituents, such as lignin, starch, fixed oil, gum, etc., are known to be inert, and may be excluded by choice of a proper menstruum.

THE AQUEOUS AND ALCOHOLIC SOLUTIONS OF ERGOT.

These differ in their effects on the circulatory apparatus. The aqueous solution excites the activity of the cardiac inhibitory centres and the vaso-motor centre in the medulla; it slackens the pulse, narrows the calibre of the small arteries, and increases the blood pressure. Very large doses paralyze the heart at once, and so effectually that the induced current fails to restore it. Such effects are not at all produced by the alcoholic solution. The latter produces symptoms akin to those of acro-narcotic poisoning, viz., irritation of the mucous membrane of the stomach and bowel, tonic cramps, agitation.

THE TREATMENT OF VARICOSE VEINS BY ERGOTINE.

Dr. Etheridge quoted from the Berlin Weekly Clinic several interesting cases of the above in which the treatment had been successful. The most generally accepted idea, is, as to the *modus medendi* of ergot subcutaneously, that diminution of the calibre of vessels is produced by the drug stimulating the smooth muscle of the veins and arteries to contract. In its use in varicose veins it doubtless partially produces diminution of the capacity of the veins by producing inflammatory infiltration above mentioned, which directly compresses the veins.

Dr. Max Schuler states as a result of many experiments that ergot produces contraction of arterioles. The smaller the vessel the larger and firmer is the contraction. Arteries increase proportionally in smooth muscular fibre as they become smaller. From this fact it is inferred that ergot exerts its effect on this muscular fibre, not necessarily through the vaso-motor nerves, for the same effect, viz., muscular contraction, could be secured in a part

injected with a solution of ergot, after the sympathetic nerve supplying the part had been cut.

Ergot by the stomach will produce none of the effects that can be called hæmostatic; subcutaneously it will produce them.

Dr. Bevan, of the Section on Clinical Reports, presented in writing several cases of interest, supplementing one of these by instructive details of the post mortem examination of the patient. The cases were limited to those of the nervous system.

The first case was that of a patient who was a Danish laborer, fifty years of age, with chronic myelitis. A year before admission to the County Hospital, while at work, he slipped from a ladder, falling sixteen feet, and struck upon his back. From time to time he had been under treatment, but as often the pain in back and side had returned. Walking became impossible, and he grew weaker. On examination, no tenderness along the spine; has to be supported when he walks—and holds the lower portion of the spine in a fixed position—gait is rotary. The treatment was seven grains of the potassium iodide with $\frac{1}{16}$ gr. strychn. sulphate in bitter infusion three times a day—after twenty days, treatment was changed, and one-half fluid drachm of ext. ergotæ fluid was exhibited three times a day—a lotion of equal parts tr. iodine and glycerine was applied to the spine and sacrum. The improvement was speedy and marked—motion of legs pretty fair—pain is slight, sleep and appetite greatly improved.

Dr. Bevan next gave the history and treatment of a case of subacute meningitis. Dr. Bevan then reported a case of epilepsy. The fourth case cited was also one of epilepsy and in a patient thirty-five years of age, an Englishwoman—of which the particulars are briefly as follows: For upwards of seventeen years the patient has had epileptic seizures, the intervals sometimes being so long as eight months. She has borne several healthy children—the catamenial functions have been normal.

An epileptic attack would come on somewhat thus: while sitting near the fire, she would drop into a partially insensible condition, resembling sleep, from which it would be impossible to arouse her. This stupor would continue ten to twelve hours, and be so profound that she has been moved in a carriage several miles unknown to herself. Pain and weight in the top of the head have lately troubled her—emaciation progresses. She never asks for food; but if awake, will take it when it is presented to her. Pulse would be 72, respiration 12, during one of these seizures; muscles flaccid, occasionally twitching; jaws firmly closed. The treatment which gave her prompt relief was the potassium bromide.

Shortly before discharge from the hospital a tonic was ordered: *R.* Strychniæ Sulphatis, gr. $\frac{1}{10}$; Acidi Nitrici Diluti, gtt. v; Infus. Gentian, f. 3 ss. *M.* Take the same three times a day.

During the discussion of the above papers, Dr. Bevan mentioned a case of diabetes mellitus which he had treated with excellent results by the use of the fluid ext. of ergot in doses of one fluid drachm four times a day. The amount of urine voided was sixteen pints daily; ten weeks after beginning treatment the amount of urine daily voided was only four pints, and very much less saccharine; the thirst and emaciation of the patient had become much less.

Dr. Owens queried whether there was any disease ergot would not relieve, and quoted a case of diarrhœa of several months duration which he relieved by using the wine of ergot. In regard to the sulphide of carbon, his experience in its use upon ulcers had been satisfactory. One patient had an ulcer upon each leg—he treated one of the ulcers by elevating the limb and warm water dressings; the other, he treated with the sulphide of carbon, and healed the ulcer quickly. The time lost by the first method of treatment was over two weeks.

Dr. Hyde thought that in many instances chronic ulcers

could be treated in no way more efficaciously or expeditiously than by cross strapping and starch bandage.

Dr. Powell mentioned two methods of treating ulcers of the leg—one by transplantation of skin; the other by half-inch incisions at intervals around the entire ulcer. It would not be sufficient merely to remove epithelial scales—actual integument was needed—a piece the one-sixteenth of a square inch would suffice to make a dozen insertions—each insertion would form a centre for granulation, which would cover about an inch. Upon the coalescence of these various islands of healthy skin, the ulcer would be healed. Little cuts should be made in the floor of the ulcer, and a piece of sound skin inserted.

Dr. Hollister adverted to a method formerly used by Dr. Brainard, that of placing upon the ulcer a piece of lint sprinkled with a little iodine.

Dr. Hyde had had good results in cases of ulcers from indolent buboes in the employment, after the above method, of bromine.

Dr. P. S. Hayes said that in one of the preparations of ergot, acetic acid was used, about one per cent. being added to the officinal fluid extract, which rendered the liquid preparation more permanent; the acid has the effect of removing all inert matter; ergotine is not a simple body like the morphia sulphate.

Dr. Powell, in a case of double popliteal aneurism, had employed hypodermic injections of ergotine upwards of five weeks, with no good results; one of the tumors even enlarged.

Dr. Etheridge remarked, that in treating varicose veins, the injections of ergotine would be useless unless made near the varix. The local inflammation produced by the irritating alcohol might be sufficient to diminish the tumor.

He never recommended the alcoholic solution for hypodermic injections; the alcoholic and aqueous solutions have no one effect in common.

One grain of the aqueous extract represents one

minim—this properly diluted may be used for hypodermic injections.

The discussion was continued by Doctors Merriman, Davis and Henrotin, with reports of cases.

Clinics.

ILLINOIS CHARITABLE EYE AND EAR INFIRMARY.

Clinical Lectures, by Dr. E. L. HOLMES.

MALIGNANT DISEASES OF THE EYE.

GENTLEMEN—I have an opportunity of presenting to you a patient with melanotic cancer of the eye. We can spend an hour no more profitably, I think, than in studying this and the three other cases of malignant disease which have come before us during the last three months.

The patient, an Irish laborer, 50 years of age, gives his history as follows: He was always in excellent health, although thin in flesh, till about six months ago, when he began to lose weight and experience fatigue at ordinary labor. Thirteen years ago he lost the sight of the *left* eye by accident, which caused very great atrophy of the globe and of the corneæ especially. He states that it is but four months since an enlargement of this eye was observed, as also the appearance of numerous small tumors in different parts of the body, which have grown to their present size in this short time.

You now perceive that the patient is exceedingly emaciated, and so weak that he can walk with great difficulty. There are three very large black lobes situated on the upper, outer, and lower portions of the atrophied eye. The mass does not protrude much anteriorly, and yet fills the anterior portion of the orbit so completely that

the tip of the finger cannot be pressed between the globe and walls of the orbit. The orbit can scarcely be so completely filled posteriorly as anteriorly, for movements of the sound eye are still accompanied with considerable motion of the diseased eye. I suspect the antero-posterior diameter of the growth is very much less than the perpendicular or transverse diameter.

The patient has experienced a sense of fullness but no pain, although for some weeks he has suffered from a peculiar dizziness. The sclerotic has evidently been absorbed by pressure of the growth from within, which now appears to be covered by a very thin layer of conjunctiva as in certain staphylomata of the choroid and sclerotic. The jet black mass is very hard but not tender on pressure.

On the back, just below the seventh cervical vertebra, is a round tumor, an inch and a half in diameter and movable under the skin. In both gluteal regions, on the left thigh and on the right side of the chest, are similar tumors, some of which are nodulated. On each side of the neck, under the sterno-mastoid muscle, is a large, ill-defined swelling, which is quite firmly attached to the adjacent tissues. These tumors are undoubtedly cancerous.

The iris, ciliary processes and choroid, with all their nerves, have evidently been wholly absorbed, probably long before the commencement of the abnormal growth, for we seldom meet with a case of intra-ocular tumor which has produced so great increase of tension (hardness) without pain.

If the patient was not so positive in regard to the time when he first observed the diseased growths in the eye and other localities, one might almost doubt the correctness of his statement, for I have never met with a case in which the tumor became so large in four months, although I have enucleated the globe for such tumors in fifteen cases. It is impossible to state how long the abnormal process may have existed in the atrophied globe before enlargement began.

There is some obstruction in respiration, possibly induced by cancerous growths in the lungs. The patient is so exhausted that surgical interference is out of the question. (The patient died five days after the clinic, in another institution. No autopsy was permitted.)

This case adds interest to the history of another patient you examined a few weeks ago.

Mr. A. ; forty-seven years of age ; had been blind in the right eye nearly twelve years. During the last two years he suffered frequent attacks of violent pain, with severe symptoms of inflammation. This comprises nearly all the previous history we can obtain. You remember the globe, at our first examination, was *very tense*, the cornea somewhat opaque ; the iris, with pupil closed, appeared to be in contact with the posterior surface of the cornea.

The conjunctiva was greatly congested, although it was not œdematous, neither were the lids swollen.

You recollect I diagnosticated a glaucomatous condition of the globe from choroiditis, possibly caused by the growth of a choroidal sarcoma, and urged the immediate extirpation of the globe. On dividing the globe, after the operation, it was found to be almost entirely filled with a dark colored mass, which the microscope proved to be a sarcoma.

By turning to the specimen which I removed from a young lady two years since, you observe this form of tumor in its early stage, for it occupies but a small portion of the intra-ocular space.

Whenever an adult patient complains of loss of sight in a portion of the field of vision, and you observe with the ophthalmoscope a circumscribed elevation behind the lens, without trembling of the retina, you can almost certainly—according to my experience—diagnosticate the case as some form of tumor, and not a simple detachment of the retina. It is important for you to know that tumors of the choroid, iris, and ciliary bodies, are pecu-

liar to adults, and are almost invariably malignant. The earlier they are removed, by extirpating the globe, the more certainly will life be prolonged.

I now present another unfortunate patient, with an epithelial cancer of the conjunctiva (sclerotic) and cornea. The patient, a farmer, forty years of age, first observed, about eighteen months ago, a peculiar growth near the inner canthus of the left eye. The patient cannot describe its early appearance very satisfactorily, except that at first it was thought to be a pterygium. The growth was removed by his family physician four times during the last four or five months. You now perceive a circular tumor, about half an inch in diameter, and a quarter of an inch in thickness, situated equally on the cornea and sclerotic. The surface is very red and rough, and, except in color, strongly resembles certain fissured warts on the hand. The tumor is remarkably well defined throughout three-quarters of its periphery, which is not the case with the other inner and lower quarter. The conjunctiva adjoining this portion of the tumor, is very red and oedematous, as if the tissue had already invaded it.

Dr. Danforth has kindly examined a minute portion of the tumor and found it to be a typical specimen of epithelial cancer. So well defined is the corneal portion of the tumor that vision is still excellent, although half of the pupil is covered. Most unfortunately the other eye was injured in boyhood to such an extent that vision has ever since been exceedingly imperfect. In enucleating the eye it will be necessary to remove the affected portion of the conjunctiva with the globe.

Before I leave this subject I will exhibit a specimen of melanotic cancer of the conjunctiva (sclerotic) and cornea, which I removed from a lady a year since, and which has a history similar to the one just related, which at first resembled a simple pterygium. You perceive the growth is remarkably well defined, smaller than the one you have just seen, but black and more elevated. The

disease had caused considerable pain, which had several times been relieved by removing the tumor. Vision was not impaired.

I think you are safe in assuming that any growth of the sclerotic and cornea, which is firmly attached to the subjacent tissues, and which reappears rapidly after it has been cut away, is malignant. Fortunately doubt can generally be removed by a preliminary microscopic examination of a minute portion of the tumor.

In conclusion, I desire to recall your attention to the two cases of malignant disease in young children, which some of you examined a few weeks since. You observed in an infant twenty months old, a peculiar glistening appearance behind the pupil of the right eye, not much unlike polished German silver. This could be readily seen through the immovable pupil without the aid of the ophthalmoscope. With this instrument vessels could be seen spread over the surface of the tumor. This appearance is so characteristic and so rarely observed except in this disease of the *retina*, called *glioma*, that you can seldom make an incorrect diagnosis in such cases. This disease is most frequently found in young children, and is terribly malignant. Its ultimate development is well illustrated in the case of the boy four years old, which you saw with an enormous fungus protruding from between the distended lids fully an inch and a half, and covered with black crusts.

The removal of glioma by extirpating the whole globe, is generally followed by a speedy development of a similar growth in the orbit, which soon proves fatal. The removal of a sarcoma is a more satisfactory operation, for the cancerous tissue is not especially prone to return in the orbit, but in some of the internal organs. The average duration of life subsequent to such an operation is said to be about four years.

The practical lesson, therefore, for you to learn, is to make an early diagnosis in all these cases, and immediately extirpate the globe.

Selections.

ON THE ALLEGED SUCCESSFUL TREATMENT OF TYPHOID FEVER BY "COLD."

BY FREDERICK T. ROBERTS, M.D., B.Sc., M.R.C.P.,

Assistant Physician and Teacher of Clinical Medicine at University College Hospital, etc.

Among the remedial measures which are attracting attention at the present time, some of the most important are those which have come into prominence in connection with the treatment of febrile diseases, and which have for their object the application of cold to the external surface of the body. Of course they do not involve any newly-discovered principle, for they are merely revived methods of a plan of treatment which is more particularly associated with the name of Currie, who laid down definite rules as to how and when it should be carried out. These measures have been during recent years much more extensively and generally employed on the continent, and especially in Germany, than in this country; but anyone who is acquainted with current medical literature must be familiar with the fact that they have not been ignored by the profession here, but have been duly recognized as affording valuable aid in the management of fevers, under certain circumstances, and that their efficacy has been tested by several accomplished observers, such as Wilson Fox, H. Weber, Ringer, Thompson, Greenhow, Clifford Allbutt, and others.

The object of the present paper is to offer a few remarks with reference to the alleged advantages of the use of "cold" in typhoid fever. But before considering the matter in connection with this particular complaint, I wish to make some observations of a general character. First, most of the methods by which the application of cold is effected require much care and attention in carrying them out; they must be conducted under the personal supervision of a competent medical attendant, and their effects need to be thoroughly watched. They have been lately alluded to as "simple remedial measures," but this they are not in any sense, for most of them involve no small difficulty in their execution, especially in private practice,

while as regards their effects on the system, they by no means come under the category of simple, harmless measures, such as may be adopted in a routine, off-hand fashion. Secondly, the more evident effects which have been noted from the employment of these applications in febrile cases are, the reduction of the temperature of the body; diminution in the frequency of the pulse; the checking of tissue change, as evidenced by the excretions and by wasting being less rapid; the relief of nervous symptoms; and the modification of the eruption in certain of the exanthemata. The eruption may be encouraged to come out, as in scarlatina or measles; or, it is stated, it may be diminished in amount and improved in quality, as in small-pox. It is in the treatment of cases attended with very high temperature—cases of hyperpyrexia—that the beneficial results of applying cold to the surface, by means of baths, etc., have been most signally obtained; and here it may be said, without any exaggeration, to have saved the lives of patients who must inevitably have died had not this method of treatment been adopted.

Several German physicians have spoken highly of the treatment of ordinary cases of various fevers, and among them of typhoid fever, to which disease I desire now to call attention more particularly. In a paper on typhoid fever in the recent volume of the St. Bartholomew's Hospital Reports, Dr. Gee considers the use of external cold in its treatment, but apparently rather from a hypothetical point of view than from any actual experience of its advantages. He implies that, if employed at an early period, during the primary fever, it might control the local intestinal lesion, by limiting the number of follicles involved; while in a more advanced stage it might be useful in reducing the secondary fever which accompanies the morbid changes in their progress.

The conclusions of those observers who have practically tested this method of treatment deserve our thoughtful attention, and it is important to ascertain what they affirm respecting it. None of those who are reliable pretend that they can actually *cure* typhoid fever, either in the sense of checking the disease at the outset, or even of shortening its course. To talk of *curing* or *arresting* this complaint shows a want of knowledge as to its nature. At the best, we can only guide it in its progress, and endeavor to bring the patient successfully through the

dangers which he has to encounter. This remark applies not only to the treatment now under consideration, but to any other which claims an influence of this kind over typhoid. Some believe that the convalescence is more rapid after the treatment by cold ; but others deny this. So also is there a difference of opinion as to whether it affects the more prominent symptoms, such as diarrhoea, tympanitis, intestinal hæmorrhage, etc. ; some asserting that these are beneficially influenced, others that they are not. All seem to agree that it does not increase the tendency to lung-inflammations, or aggravate these if they already exist. The most important statement made is, that this method of treatment has greatly reduced the mortality from typhoid fever, particularly when the cases have been treated from an early period. Certainly the returns made show a great difference in this respect, when the past is compared with the present, and seem to indicate a highly satisfactory result. At the same time, before any certain conclusion can be arrived at, a large number of cases ought to be taken into consideration ; for it often happens that a series come under treatment which are of a mild type, and the mortality may present a very low percentage, whatever treatment may have been adopted ; while some epidemics are very fatal. Judging from personal experience, and combining hospital with private practice, I believe that the rate of mortality has not been higher in the cases which have come under my own notice than it is represented in the German returns. The mortality in former times was decidedly high, and it would be well to know what modes of treatment were then adopted, as they were not always of a harmless character in days gone by, while the diet and hygienic conditions—most important elements in the treatment of typhoid—were not attended to then as they are now.

Those who adopt this plan of treatment are anything but agreed as to the details of carrying it out. The principal methods employed are frequent cold or tepid sponging of the skin, wet-packing, cold baths, affusion, and tepid baths gradually cooled. Some pursue the treatment vigorously in all cases ; others only when the temperature reaches a certain height. There are also differences as regards the duration of each application, the frequency of their repetition, and the length of time during which they are continued.

I venture to state briefly the conclusions which I have

arrived at with respect to the treatment now under consideration.

1. It is highly desirable that the members of our profession should be more generally impressed than they are at present, with the usefulness of the various modes of applying cold to the surface of the body in febrile cases, under certain circumstances; and that they should be prepared without hesitation to carry one or other of them out efficiently whenever this plan of treatment is indicated. This applies to typhoid in common with other fevers.

2. On the other hand, to adopt a routine hydropathic treatment of any fever seems to me most objectionable, and this applies especially to the more severe methods which are advocated. As already remarked, they are not easily carried out in general practice; they are certainly not required in a large proportion of cases; most of them are anything but pleasant to the patients, and they may prove very trying and exhausting, especially if frequently repeated, as they usually need to be if the treatment is efficiently fulfilled; while it must be remembered that they are not harmless measures, but may have a powerful influence for evil as well as for good. With regard to typhoid, many cases do not come under observation until it is too late to attempt to check the primary fever, even supposing that the intestinal lesion could be thus limited. For these and other reasons I do not see that, at present at least, a hydropathic treatment of typhoid fever in general practice has any claim to our support. If it is thought worthy of trial, it ought first to be fairly tested in *bona fide* cases of this disease, and under the strictest and most competent supervision. With regard to sponging of the skin, I believe that this is often very useful, and ought to be employed far more frequently than it is at present, in typhoid as well as in other fevers. With proper care it does no harm, while it often gives much relief, and is beneficial in other respects.

3. The cases in which the more severe methods of applying cold are indicated are those in which the temperature is already very high and remains so, or shows a tendency to rise rapidly, especially if at the same time there are signs of much nervous disturbance. Unquestionably this plan of treatment is not resorted to under these circumstances nearly so frequently as it ought to be. It is difficult to lay down any exact rule as to what

temperature indicates the necessity for adopting it, but if it reaches to 106° F. and shows no tendency to fall, or, still more, if it continues to rise, this treatment deserves due consideration. Necessarily much will depend on the actual condition of the patient, and every case must be thoroughly considered in all its features. The best method seems to me decidedly that of placing the patient in a tepid bath, and gradually cooling this. Affusion over the head is useful if there are marked nervous symptoms. Of course it is imperative that this treatment should be always conducted under the strictest supervision, and its effects carefully watched.—*Practitioner*.

ON THE PHYSIOLOGY OF THE ACT OF VOMITING.

BY W. H. BROADBENT, M.D., F.R.C.P.

In the interesting article on vomiting in the *Practitioner* for January, by the Editor, an active part in the expulsion of the contents of the stomach is attributed to the diaphragm; that is, the stomach is said to be compressed by a simultaneous contraction of the diaphragm and abdominal muscles. This, moreover, is what is taught in most of the standard works on physiology, and it is considered to be established by an experiment in which the contents of the stomach were expelled by the contraction of the diaphragm after the abdominal parietes had been cut away to near the linea alba.

We cannot attach demonstrative value to an experiment in which such extensive mutilation is practiced, and I have been led by observation of the phenomena of vomiting to question the accuracy of the generally received account of its production, and to come to the conclusion that the contraction of the diaphragm does not coincide in time with that of the abdominal muscles, but that the diaphragm first descends and is fixed by closure of the glottis, forming thus a firm but passive and merely resisting plane, against which the stomach is pressed by the actively contracting muscles of the abdominal wall.

I might cite in favor of this view the anatomical consideration that the œsophageal opening in the diaphragm lies between the decussating fibres of the pillars, and that when these fibres are contracting powerfully they will compress the œsophagus. This point, however, has

frequently been set forth, and all *a priori* arguments, even from anatomical facts, must yield to actual observation.

I have attempted direct experimental observations, but under circumstances which did not permit of definite conclusions, since they were made on animals in which the anterior wall of the thorax was removed for the purposes of another investigation. Such as they were, however, they were confirmatory. But I must rely entirely on what may be noted in the human subject in the act of vomiting. During the antecedent nausea and in the intervals of the paroxysms, there is shallow respiration with a wide-open glottis, together with frequent sighing. A paroxysm is ushered in by a sudden inspiratory gasp—that is, by a descent or contraction of the diaphragm—and the success of the effort of expulsion appears to depend greatly upon the extent of this descent, and upon the point at which the diaphragm is arrested and fixed by the closure of the glottis. If the diaphragm were in active contraction at the moment of actual vomiting, we might expect that at any rate some of the sounds then produced would be inspiratory, whereas they are entirely expiratory, and much air is often forced out of the chest by the same act which expels the contents of the stomach. Any contraction of the diaphragm must thus be overcome as well as the resistance of the glottis. Another consequence of contraction of the diaphragm as a part of the expulsive effort in vomiting would be a tendency to inspiration of the vomited matters while passing over the orifice of the larynx, which we might expect to see abundantly realized from time to time; whereas any slight entry of these matters which takes place, occurs in the inspiration which follows the actual vomiting. This same deep inspiration, again, after the convulsive retch, would appear to be conclusive evidence that the diaphragm had no share in it. It may be added that we should scarcely have the powerful compression of the lungs and heart in the act of vomiting, of which we sometimes seek to avail ourselves therapeutically, were the diaphragm contracting entirely against the expiratory muscles. Finally, the expulsive effort may be defeated by maintaining the glottis open. Such, at least, is my conclusion from a painful personal experience or experiment carried to the extent of my powers of endurance.

This note may be fitly ended by an observation in

which the theory of the act of vomiting here maintained was turned to practical account. While resident medical officer to St. Mary's Hospital I performed the operation of tracheotomy on a young child. Two or three days afterwards I was called to the child, and found it in convulsions. Watching it carefully, I perceived that the general convulsive movements were preceded by violent contraction of the abdominal muscles, with facial movements suggestive of vomiting. The attempt to expel the contents of the stomach was, however, defeated by the absence of *appui* for the diaphragm by closure of the glottis, due to the opening in the trachea. Recognizing this, I closed the tube at the moment of each expulsive effort; free vomiting occurred, and the convulsions at once ceased.—*Practitioner*.

Editors' Book Table.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

PHYSICIAN'S CASE RECORD AND PRESCRIPTION BLANK BOOK,
WITH VISITING LIST. Cincinnati Case Record Company.
1875.

Upon the first appearance of this Case Record as a candidate for popularity, we were not so much prepossessed in its favor as we have subsequently become by a practical acquaintance with its advantages. "The proof of the pudding is the eating thereof," and the same may be said of other things besides puddings. The use of these Case Records will enable the student, we mean the physician who studies his cases, to preserve a mass of clinical memoranda which would otherwise be lost. The Record has been found especially useful for the preservation of Notes of Hospital Practice, and for this purpose we have introduced it into St. Joseph's Hospital, where its advantages have been apparent to all. Some trouble is

doubtless entailed by the use of any system of recording cases, and this will prove an insurmountable objection to all methods in the eyes of many. By these books, this trouble is reduced to a minimum, and, in comparison with the value of the object to be attained, becomes insignificant. H.

QUESTIONS IN ANATOMY : for the Use of Students. By *Corydon L. Ford, M.D.*, Professor of Anatomy in the University of Michigan, Ann Arbor, Mich. 1873.

This little book must prove very useful to students as a guide and indicator of what is necessary and useful to be learned in anatomy. The answers to the questions must be looked for elsewhere, in a text book, or in that best of all anatomical text books, the human body. The questions will serve very well to concentrate the attention of the student, and prevent waste of time upon incidental or irrelevant matter. An improvement suggests itself in the "make up" of the book, which we venture to hint to the author before the publication of a new edition, *i. e.*, the interpolation of blank pages upon which the student might write his answers as drawn from his own dissections, thus constituting it an invaluable aid to his memory, more permanent by far than his recollection of lessons in text books or oral instruction. H.

TRANSACTIONS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. Volume Fourth. Containing the Report of the Proceedings for the Years 1871-2-3. Edited by *James Tyson, M.D.*, Hospital Lecturer on Pathological Anatomy and Histology in the University of Pennsylvania, etc., Recorder of the Society. Philadelphia : Printed for the Society by J. B. Lippencott & Co. 1874.

A model volume, containing a List of Former Presidents, the Officers and Committees of the Society for the past year, a list of Members, comprising Non-Resident and Corresponding; and a List of Specimens presented to the Society, the Address of the Retiring President, and the Report of the Committee upon the Pathology of the various Morbid Specimens referred for Examination.

One feature in the list of members is somewhat novel, *i. e.*, the addendum, to certain names, "forfeited membership for non-payment of dues," which can scarcely be commended on the score of good taste, however efficient it may be as a protection to the finances of the Society.

The report upon each morbid specimen is brief, clear and explicit, based upon careful direct examinations, sustained, when necessary, by authority, but uncomplicated and unobscured by discussions and personal opinions.

The specimens represented number two hundred and forty-three—upon thirty-nine of which special reports have been made, of which nine are well illustrated by wood-cuts.

The whole constitutes the best specimen of a work of the kind we have ever seen, reflecting credit upon the Society at large, and especially upon the committees. The mechanical execution of this Report is very far above the average, and the paper, type and press work are creditable to the printers, Messrs. J. B. Lippencott & Co.

H.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE : for the Use of Physicians and Students. By *James Tyson, M.D.*, Hospital Lecturer on Pathological Anatomy in the University of Pennsylvania, etc., etc., with a plate and numerous illustrations. Philadelphia : Lindsay & Blakiston. 1875.

Dr. Tyson's name alone would be a guarantee of the excellence of a book. In this case, a careful examination fully justifies the assumption. The practical man will find in this little book all that is absolutely necessary for him to know, in order to utilize fully the data supplied by the urine, in the formation of accurate diagnoses, and will find it, moreover, presented in a condensed form, free from useless and irrelevant verbiage which sometimes encumbers more pretentious and elaborate treatises. A practitioner can hardly afford to dispense with this little manual, unless he has some equally good substitute, which would be difficult to find—a better we are sure he cannot find.

H.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS. Delivered at University College Hospital by *Sir Henry Thompson*, Surgeon Extraordinary to His Majesty the King of the Belgians, Professor of Clinical Surgery, and Surgeon to the University College Hospital. Second American from the Third and Revised English Edition, with Illustrations. Philadelphia: Henry C. Lea. 1874.

Everything within the range of the pathology of the urinary organs, coming from the pen of Sir Henry Thompson, possesses interest and value. The volume before us comprises fourteen lectures essentially practical in their character, written clearly and concisely. The subjects are treated with the precision of a teacher, and the authority of a master, of one who has learned his art, and who never subordinates practical experience to theory. His instructions for passing the catheter or bougie are illustrative of this: "I pity the patient who has a solid instrument thrust into his body by a knowing man at anatomy," indicating thereby what is doubtless perfectly true, the necessity of paying more attention to the peculiarities of each individual urethra than to arbitrary anatomical rules.

For the treatment of stricture, the author gives the preference to internal incision, after describing fully and discussing fairly the processes of dilatation, gradual and forcible, and Symes', or the operation of external urethrotomy.

For the performance of the operation, too, he gives the preference to the instrument of Civiale, on account of its simplicity, as "far better than a machine which makes a certain incision mechanically, and is not controlled or guided by the intelligence of the surgeon."

The chapters on prostatic disease are interesting. The distinction between the two forms, occurring at different periods of life, inflammatory enlargement, prostatitis, frequently observed in young subjects, and hypertrophy occurring in old age, is clearly drawn, each class of cases being well defined. The latter form of the disease the author declares to be by no means so frequent as has hitherto been asserted by writers, and generally believed

by the profession at large. Out of two hundred persons dying beyond the age of fifty-five years in the Marylebone Infirmary, and dissected very carefully by himself, he found but three in one hundred to be the subjects of prostatic enlargement. He assumes, therefore, that one in ten would be a large estimate for the cases of disease of this organ in persons beyond the age of sixty years, which opinion will doubtless be sustained by the observation of the vast majority of his readers in this country at least.

In referring to the condition of the bladder as associated with stricture the author wishes "to render this sentence in the largest capitals," that "INVOLUNTARY MICTURITION INDICATES RETENTION AND NOT INCONTINENCE." The chapter upon Extravasation of Urine and Urinary Fistulæ, is written instructively and in a very hopeful spirit concerning the results of operative procedures in these distressing conditions.

With the subject of calculi and their removal, Sir Henry Thompson's name has been so thoroughly and universally identified, as to make whatever he may have to say upon it, of peculiar interest, and this assumption will only be justified by careful study of the chapter devoted to Lithotrity and Lithotomy. For the former operation, in the performance of which he has become so widely celebrated, his preference is indicated by the emphatic declaration, "if the stone is discovered when sufficiently small, *it can always be crushed with an almost CERTAIN CHANCE of success;*" "so that lithotomy for adults must at some day disappear, except for cases which have been neglected by patients themselves, or have been overlooked by the medical attendant."

Of the subject of Lithotomy there is a very interesting historical as well as surgical sketch which will well repay the reader.

One of the chief merits of this book is its brevity; what the author has to say is said well and concisely, the volume of less than two hundred pages containing

more valuable matter than in many instances would be diluted with five or six hundred of words. The paper, type and mechanical work are better even than Mr. Lea's average standard, which is a high one. H.

EXAMINATION OF THE URINE. By *Geo. B. Fowler, M.D.*, Examiner in Physiology, College of Physicians and Surgeons, New York; Fellow of New York Academy of Medicine; Member of N. Y. County Medical Society, etc. New York: D. Appleton & Company. 1874.

"This book is intended simply as a Guide," says the author in his preface, and we are quite sure that the student who will make it his "guide" and follow its lead step by step through its exposition of the various conditions of urine, normal and morbid, and the means for their detection, will feel satisfied that his time has been profitably spent in studying Dr. Fowler's manual of eighty pages. H.

THE DRIFT OF MENTAL PHILOSOPHY. An Essay. By *D. A. Gorton, M.D.* Revised Edition. Philadelphia: J. B. Lippencott & Co. 1875.

This is a rehash of the "olla podrida" which was served up a year ago under the title "Principles of Mental Hygiene," and noticed somewhat at length in this JOURNAL. Of the present (very unsuccessful) Essay we will borrow the criticism—truly Delphic—of the New York Medical Journal, "the work demands careful reading." H.

INFLAMMATION OF THE LUNGS: TUBERCULOSIS AND CONSUMPTION. Twelve Lectures. By *Dr. Ludwig Buhl*, Professor of Pathological Anatomy and General Pathology in the University of Munich, etc., etc., etc. Translated by permission from the Second German Edition, by Matthew D. Mann, M.D., and Samuel B. St. John, M.D. New York: G. P. Putnam's Sons. 1874.

In view of the great interest awakened in the subjects consumption and tuberculosis and the differential diagnosis, by the investigations of Rindfleisch, Niemeyer,

Schultze and others, these letters of Prof. Buhl must be read with peculiar pleasure, as the opinions of a pioneer in this field of research, whose opportunities for observation have been singularly favorable. The careful student will detect in the results of the author's investigations a striking similarity in the pathological processes occurring in the lungs to those observed by Johnson and others in the kidneys, and an illustration of the simplicity and comprehension of pathological—and, *a fortiori*, physiological—processes when isolated from incidental and considered only in relation to their essential factors. No one desirous to keep up with the advance of pulmonary pathology can afford to neglect this little book, and their thanks are especially due to the translators who have put the work so skillfully in the English garb for their use.

H.

THE MEDICAL USES OF ALCOHOL; AND STIMULANTS FOR WOMEN. By *James Edmunds, M.D.*, Member of the Royal College of Physicians of London; Member of the Royal College of Surgeons of London; late Senior Physician to British Lying-in Hospital; Senior Physician to the London Temperance Hospital. New York: National Temperance Society and Publication House. 1874.

A temperance tract having for its essential characteristic, intemperance advocating temperance in intemperate language and appealing to reason by the shallowest sophistry—denouncing medical dogmata in opinions essentially dogmatic. This little book will, like millions of tons of its fellows, fail to accomplish its object for these very reasons. *Falsus in uno falsus in omnibus* will ever be the judgment of the human mind concerning books as well as men and principles.

BOOKS RECEIVED.

THE PATHOLOGICAL SIGNIFICANCE OF NEMATODE ENTOZOA. By *T. R. Lewis, M.B.*, Staff Surgeon to Her Majesty's British Forces, (on special duty), attached to the Sanitary Commissioner with the Government of India. Calcutta: Office of the Superintendent of Government Printing. 1874.

THE HISTOLOGY AND HISTO-CHEMISTRY OF MAN: a Treatise on the Elements of Composition and Structure of the Human Body, by *Heinrich Frey*, Professor of Medicine in Zurich. Translated from the Fourth German Edition, by Arthur E. J. Barker, Surgeon to the City of Dublin Hospital; Demonstrator of Anatomy, Royal College of Surgeons, Ireland; Visiting Surgeon, Convalescent Home, Stillorgan; and revised by the author. With six hundred and eight Engravings on Wood. New York: D. Appleton & Co. 1875.

FUNCTIONAL DERANGEMENTS OF THE LIVER, being the Croonian Lectures delivered at the Royal College of Physicians in March, 1874, by *Charles Murchison, M.D., LL.D., F.R.S.*, Fellow of the Royal College of Physicians; Physician and Lecturer on the Principles and Practice of Medicine, St. Thomas Hospital; Vice-President and Consulting Physician, London Fever Hospital; Formerly Physician and Lecturer on Medicine, Middlesex Hospital, and on the Medical Staff of H. M.'s Bengal Army. New York: William Wood & Co. 1875.

LECTURES ON THE DISEASES OF THE RESPIRATORY ORGANS, HEART AND KIDNEYS. By *Alfred Loomis*, Professor of Pathology and Practical Medicine in the Medical Department of the University of the City of New York; Consulting Physician to the Charity Hospital, etc., etc. New York: William Wood & Co. 1875.

A REPORT OF MICROSCOPICAL AND PHYSIOLOGICAL RESEARCHES into the Nature of the Agent or Agents Producing Cholera, (second series). By *T.R. Lewis, M.B.*, and *D. D. Cunningham, M.B.*, Surgeons, H. M. Indian Medical Service, (on special duty), attached to the Sanitary Commissioner with the Government of India. Calcutta: Office of the Superintendent of Government Printing. 1874.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by *Dr. H. Von Ziemssen*, Professor of Clinical Medicine in Munich, Bavaria. Vol. II, Acute Infectious Diseases. By Prof. Thomas, of Leipzig; Dr. Curschmann, of Berlin; Dr. Leulzer, of Berlin; Prof. Hertz, of Amsterdam, and Prof. Von Ziemssen, of Munich. Translated by James C. White, M.D., and Edward Nigglesworth, Jr., M.D., of Boston; Edward W. Schauffer, M.D., of Kansas City; and A. Brayton Hall, M.D., J. Haven Emerson, M.D., George H. Fox, M.D., Edward Frankel, M.D., and John C. Jay, Jr., M.D., of New York. Albert H. Buck, M.D., of New York, Editor of American Edition. New York: Wm. Wood & Co. 1875.

PAMPHLETS RECEIVED.

SCLERITIS SYPHILITICA: its Pathology, Course and Treatment. By *Fred. Sturges, M.D.*, one of the Surgeons to the Charity Hospital, Blackwell's Island, Lecturer on Venereal in the Medical Department of the University of New York, etc. New York: G. P. Putnam's Sons. 1875.

A RETROSPECT OF THE STRUGGLES AND TRIUMPHS OF OVARIOTOMY IN PHILADELPHIA, with some Additional Remarks on Allied Subjects: The Annual Address before the Philadelphia County Medical Society. By *Washington L. Atlee, M.D.*, Retiring President. Delivered Feb. 1, 1875. Published by order of the Society. Philadelphia. 1875.

REPORT OF THE VACCINE DEPARTMENT of the New York Dispensary for the year 1874. By *Frank P. Foster, M.D.*, Director of the Vaccine Department. New York. 1875.

RESEARCHES INTO THE ACTION OF MERCURY, PODOPHYLLIN AND TARAXACUM ON THE BILIARY SECRETION, being the Report of the Edinburgh Committee of the British Association. By *John Hughes Bennett, M.D., F.R.S.E.*, Chairman and Reporter. Second Edition and Appendix. Chicago: C. H. Garrison, M.D. 1874.

ANNUAL ANNOUNCEMENT of the Medical College of the Pacific (Late Medical Department of the University of the Pacific), being the Medical Department of the University (City) College, San Francisco. Session of 1875.

CATALOGUE of the Trustees, Professors and Students of the Jefferson Medical College of Philadelphia. Session 1874-5. Also,

GRADUATES of the Jefferson Medical College of Philadelphia. March, 1875.

JOURNALS RECEIVED.

The American Medical Weekly—Vol. ii, Nos. 8, 9, 10, 11, 12.
 The Atlanta Medical and Surgical Journal—Vol. xii, Nos. 11, 12.
 The American Practitioner—Vol. ii, No. 63.
 The Boston Medical and Surgical Journal—Vol. xcii, Nos. 7, 8, 9, 10, 11.
 The Canada Medical and Surgical Journal—Vol. iii, Nos. 8, 9.
 The Clinic, Cincinnati—Vol. viii, Nos. 8, 9, 10, 11, 12.

- The Cincinnati Lancet and Observer—Vol. xviii, No. 3.
The Canada Medical Record—Vol. iii, No. 7.
The Detroit Review of Medicine and Pharmacy—Vol. x, No. 3.
The Eclectic Medical Journal—Vol. xxxv, No. 3.
The Indiana Journal of Medicine—Vol. i, No. 11.
The Journal of Materia Medica—Vol. xiv, No. 2.
The Kansas City Medical Journal—Vol. v, No. 1.
The London Lancet—February, 1875.
The Monthly Abstract of Medical Sciences—Vol. ii, Nos. 2, 3.
The Medical and Surgical Reporter, Philadelphia—Vol. xxxii, Nos. 8, 9, 10, 11, 12.
The Medical Times, Philadelphia—Vol. v, Nos. 173, 174, 175, 176, 177.
The Medical Herald, Leavenworth—Vol. viii, Nos. 8, 9.
The Medical Record, New York—Vol. x, Nos. 8, 9, 10, 11, 12.
The Medical Examiner, Chicago—Vol. xvi, No. 5.
The Medical News and Library—Vol. xxxiii, No. 387.
The Missouri Clinical Record—Vol. i, No. 12.
The Medical Eclectic—Vol. ii, No. 2.
The Medical Press and Circular, London—No. 1880.
The Nashville Journal of Medicine and Surgery—Vol. xv, No. 3.
The New York Medical Journal—Vol. xxi, No. 3.
The New Orleans Medical and Surgical Journal—Vol. ii, No. 5.
The Ohio Medical and Surgical Reporter—Vol. ix, No. 2.
The Pacific Medical and Surgical Journal—Vol. xvi, Nos. 9, 10.
Le Progres Medical, 3c Annee—Nos. 1, 2, 3, 4, 5.
The Physician and Pharmacist—Vol. viii, No. 1.
The Practitioner, London—No. lxxx.
The Pharmacist—Vol. viii, No. 3.
The Psychological and Medico-Legal Journal—Vol. ii, No. 3.
The Peninsular Journal of Medicine—Vol. xi, No. 3.
The Richmond and Louisville Medical and Surgical Journal—Vol. xix, No. 23.
El Repertorio Jalisciense, Guadalajara—Tomo i, No. 7, 8.
The Southern Medical Record—Vol. v, No. 1.
The St. Louis Medical and Surgical Journal—Vol. xii, Nos. 2, 3.
The Technologist—Vol. vi, No. 2.
The United States Medical Investigator—Vol., Nos. 1, 4.
The Virginia Medical Monthly—Vol. i, No. 12.

Editorial.

"Bills of Interest to the Medical Profession."

Under this caption, the Philadelphia *Medical Times* editorially directs attention to three "Bills" now pending before the Legislature of the State of Pennsylvania. Of the first, "An Act to Regulate the Practice of Medicine, Surgery and Obstetrics in the Commonwealth of Pennsylvania," we will say, in the language of our excellent cotemporary, "we think this bill a very good one, although, of course, we should like to have seen it go further," so as not only to "do away with two great evils—practicing medicine without a diploma, and peripatetic quackery," but also to accomplish the organization of a "State Board of Examiners, before whom every aspirant for practice should appear." We should like very much to see statutes enacted in this State which should comprehend such desirable objects.

"The second act," however, is that which has more especially attracted our attention, and the strong resemblance in its features to one of a similar character which was urged upon the Legislature of this State at its last session, and to another, also, which was urged upon Congress at its last session, in the guise of a National Board of Health, suggests a common paternity for each and all of them. The Philadelphia *Medical Times* is generally acute of perception and merciless to frauds of all sorts, and if, after a critical analysis of this "Bill," a humbug and fraud is not detected, then we will acknowledge that we have mistaken the "foot-prints in the sand," and that it is not *our* African hidden in our neighbor's wood-pile, but one of his own, who closely resembles him. There is a German proverb: „Wo Rauch ist, da ist auch Feuer,"—hence our suspicions.

This JOURNAL, under the caption, "An Asylum for Imbeciles," directed public attention to the true gist of

this same "Bill," for we shall be much surprised if it be not the same Bill, or an "artist's proof" of it, as presented to the Legislature of the State of Illinois, showing what an admirable contrivance was therein devised for the creation of a sinecure. The essence of the whole matter being a "Secretary," endowed with a position of legal—if not of medical—respectability, a modicum of superficial acquirements to dazzle country members, a panoply of impenetrable brass, and "sine qua non"—"three thousand dollars a year." Does the State of Pennsylvania contain "five physicians" fitted to fill the position designed for them by this "Bill," willing to serve without salary? If so, she can boast of five true philanthropists, ready to sacrifice themselves for the—support of the Secretary. Has the State of Pennsylvania a physician fitted, by the possession of great administrative ability, a liberal education, profound and extensive scientific attainments, studious and laborious habits of life, to fulfill the important duties which must devolve upon the Secretary of the State Board of Health of that vast Commonwealth, willing to sacrifice the splendid professional position and lucrative practice which such qualifications always command, for the paltry stipend of three thousand dollars? If so, she must be credited with another philanthropist, and may rejoice in her possessions over her sister States—certainly over ours, who have none such. We had one once, but he has departed, and the places which knew him now know him no more, and we know not whither he has gone, unless the Commonwealth of Pennsylvania has borrowed him, or he has vanished in "smoke."

To our friend the *Times* we are under many obligations for its skillful detection and brave denunciation of many frauds of many kinds, and we would willingly cancel some of them by a word of caution. Look well to your "Bills" before they become laws, or you may find too late that you have permitted a parasite, the shae "Secretary," to secure a legal hold upon the body pro-

fessional, and attract to it as much odium as would the presence of a parasite of another kind upon the body personal.

H.

Medical Education and Medical Legislation.

The period of the annual recurrence of Medical College Commencements is always the occasion for diatribes, in medical and secular journals, upon the defects of "the Modern System of Medical Education," the "low standard of preliminary acquirements," the "superficial character of the instruction imparted to medical students," and various other disadvantages which the American, and especially the Western, medical student is supposed to sustain, in comparison with his more fortunate compeer on the other side of the ocean. The stereotyped facetiæ about "crops of sawbones," "licenses to kill," etc., occupy their usual places in the "funny columns" of the press. The critics are not, however, altogether merciless, for while indicating the faults they are charitable enough to designate the remedy, and this they find in that great panacea of the untutored mind, "the law." The grand catholicon, under whose magical influence all these evils are to disappear, is "Medical Legislation." Teachers are to be made competent and conscientious, students instructed and accomplished, physicians learned and skillful, by acts of legislature.

Lord Thurlow said that an "act of Parliament could not be drawn through which he could not drive a coach and horses." Might not a medical student be driven through an "Act of Legislature"? Legislation, then, appears to be, in the eyes of the reformers, the means, and the only means, by which the medical profession is to be brought "up to the level of the legal and clerical," with each of which it is now most discreditably compared.

Having had much better opportunities for judging this question than the majority at least of the critics and reformers, from both the outside and inside point of view,

we will take the liberty to examine the subject a little more closely. The relative qualifications of the three so-called learned professions may be compared in a very few words. The first, the theologians, may be left to themselves, as of the three hundred and sixty-five (or seven, we forget which,) sects, no one can be found unwilling to condemn all the others of gross ignorance, and with some measure of justice, as but one can be right. The qualifications of the members of the legal profession are exemplified in the almost impossibility of securing the conviction of many criminals of whose guilt there is a moral certainty. Moreover, the attenuation of an estate emerged from chancery is aptly comparable to the emaciation of a patient convalescent from a wasting disease; and while it is true in this and some other communities, that the legal profession opens more numerous collateral avenues to wealth, into which many of its members have entered, than the medical, it is equally true that, in regard to professional education, general culture, and practical skill, the members of the latter are fully equal to those of the former, class for class, rank for rank. The comparison is confidently challenged, without fear of the result.

To the self-styled critics; those of them at least who are members of a profession which they seem anxious to decry, a question is in order. Is the low standard of professional education which they deplore that to which they themselves were brought, or that to which the student of to-day must conform?

We assert boldly, that were the great mass of general practitioners required to pass the examination to which medical students are now subjected, and which is yearly becoming more rigid, the percentage of rejections would be far greater than in an average class of candidates for graduation in many of the medical colleges. Don't condemn the graduate of to-day until you have measured your acquirements with his. All that is old is not venerable. There are antique as well as modern shams, and the "....laudator temporis acti" lived too in the days of Horace.

In the opinion of many, these evils may all be effectually remedied by the establishment of a State Board of Examiners, whose certificate should be not only *prima facie* evidence, but proof of the competency of medical men. The idea is plausible and superficially captivating, but will it justify our endorsement when critically analyzed? In the first place, we fail to perceive in what respect the certificate of a State Board of Examiners will be more positive evidence of competency than the diploma of the faculty of a college, as the latter would be, in all probability, the larger body of the two, and equal at least to the former in professional standing, being composed of physicians deemed by their colleagues—the most competent tribunal—peculiarly fitted for their positions.

Faculties of medical colleges are always, to say the least, up to the average of their profession in point of ability and professional acquirement, and usually above it, never below. Can the same be said of “Boards” consisting in whole or in part of medical men?

How could these Boards be appointed? by the Governor? that is to say, by personal influence; by the Legislature? that is to say, by political influence; or by the people? that is to say, by popular influence. Than the first of these there could hardly be a more unreliable method of choosing the fittest, except the second and third, and the same might be said of each of the other methods respectively. The Governor would appoint his own physician and his friends, or suffer an imputation upon his own judgment. The Legislature would appoint those having most political influence, in the acquisition of which no man ever became an accomplished physician. And the people would elect the most popular doctors, who would generally be found to have cultivated popularity, to the exclusion of science.

Considered in its economical aspects, the scheme presents features demanding careful scrutiny in these days of high taxes and public and private indebtedness. A “State Board” of Medical Examiners must consist of at

least one expert in each department of medicine, as now taught, with provision for the addition of others as they may become necessary for the advancement of science, *i. e.*, in Anatomy, Chemistry—organic and inorganic—Materia Medica and Medical Botany, Physiology, Pathology, Surgery, Obstetrics and Gynæcology, Practical Medicine in its various branches, Microscopy, Electricity, etc. It would be difficult to constitute a Board of less than ten members expert in all these departments of medical science and art. This is only what every medical college aims to accomplish—and, it would appear, with a certain measure of success—for its own students. Moreover, this Board must occupy itself exclusively with its duties and the preparation for them, and must be paid a minimum of ten thousand dollars for each of its members. Add to this fifty per cent. for incidental expenses, and we have an item of one hundred and fifty thousand dollars to be added to the annual taxes of the people of the State. How will this view of the picture please the people who clamor so loudly for “medical reform”?

In this country, for the last ninety-nine years, we have been playing the game Republic, in which “we make believe” that every player has equal rights to “life, liberty, and the pursuit of happiness.” It is true the game is nearly played out, but some of us are not yet tired, and want to “play on till dark;” and while others may clamor to give up and play a new game, perhaps “Monarchy,” or “Military Dictatorship,” or something else, we insist upon the maintenance of the original conditions. Some of us find our pursuit of happiness in the care of bodies, some in the care of souls, and some in the care of estates. Because one may not save some vile body from the grave by arts of which people know little, shall he be forbidden by the law from trying to save others? Because one may not save some viler souls from hell by arts of which the people know less, shall he be forbidden by the law from trying to point out the other road, although his knowledge thereof be none of the

clearest? Because one fails to convince an unimpressible jury that the blood-stained fingers of his client in the dock are whiter than the driven snow, and thus save his neck from the gallows, shall he be forbidden by the law to try to pluck its legitimate fruit from that too barren tree?

This is "paternalism" run mad. If the State requires an arbitrary standard of proficiency in one rank of life, it must exact it similarly in all. There must be a State Board for the examination of clergymen, doctors, lawyers, apothecaries, grocers, liquor dealers, horse-shoers, plumbers, sewer builders, and night scavengers; for they and many more are directly instrumental in the preservation of public—and private—health.

Again, if the State exacts an arbitrary standard of professional proficiency, it is obligatory upon the State to provide the means and appliances whereby it may be reached, otherwise the State becomes an irresponsible tyranny.

This involves the establishment of a system of public education, comprehending every branch of human knowledge, which must be free to all, since all are compelled to accept its provisions. Have the reformers ever counted the cost of so comprehensive a scheme?

We have seen several of these projects for the establishment of "State Boards," and—while we have no desire or intention to stigmatize all as such—these were all nothing more nor less than contrivances by which somebody, unable or unwilling, or both, to attain professional position by hard work, sought to acquire some temporary notoriety, a small stipend, and "the chances," at the expense of the State.

In conclusion, we assert our most thorough sympathy with those who desire the elevation of the standard of professional education, but cannot endorse all the utopian schemes which have been devised for the accomplishment, believing the only reasonable plan—which must eventually succeed—to be the silent force of example.

Let every critic and reformer study diligently and faithfully to become truly expert in some department of his profession, and all who come within the range of his influence will be stimulated to follow his example—and so the standard of medical education will be raised *tuto, cito, et jucunde*. H.

Died.

Dr. JOSHUA RILEY, of Georgetown, D. C., died recently of angina pectoris, aged 75 years. He graduated at the University of Maryland in 1824, soon after which he commenced the practice of medicine, and located in Georgetown. From 1844 to 1859 he occupied the chair of Materia Medica, in the Medical Department of Columbian College, and for many years was President of the Medical Association of the District of Columbia. At the recent meeting of this Society, appropriate resolutions were passed, and remarks were made by Drs. Grafton Tyler, L. Mackall, Jr., Armistead Peter, Noble Young, J. F. May, and Lieberman.—*N. Y. Medical Record*, March 20, 1875.

We transcribe the above notice from the pages of the *Record*, in order that we may add thereto our tribute of respect to the memory of a noble old man, an honor to his profession and to his kind.

It has been our good fortune to enjoy for many years the acquaintance of Dr. Riley, and, during three or four of these, to listen to his lectures from his Chair of Materia Medica, and always to find in him the judicious physician, the conscientious instructor, the kind and sympathizing friend.

Few men have ever lived lives so blameless as his, and few have gone down to their graves leaving records as stainless. He was the friend of all, the enemy of none. By his sterling integrity of character he won the respect and confidence, and by his kindness and true philanthropy, the love and affection of all who knew him.

He was, in an especial manner, the student's friend ; as instructor, faithful ; as counsellor, prompt, sagacious and encouraging.

Two and twenty years, crowded with the changes and vicissitudes of a more than usually eventful life, have passed, since we received his hearty congratulations and kind farewell upon launching our bark upon the broad ocean of professional life, but many more years must glide into the abyss of eternity, and the recollections of his many virtues fade from the "written tablet of the brain," ere we cease to do honor to the memory of a revered preceptor, a well beloved friend. " May he rest in peace!"

H.

BOARD OF HEALTH, OFFICE SANITARY SUPT. }
CHICAGO, March, 1875. }

Dr. W. Hay, Editor Journal :

DEAR SIR—You will see by the following mortality report that the number of deaths have decreased one hundred and twenty-two compared with last month, and twenty-three compared with the corresponding month of last year. At present, we are comparatively free from small-pox, the few cases in the city are of a mild type ; we have had but three deaths from this cause since July last. At present a large number of cases of scarlatina and measles are present in the city, but as a rule are very light, but few deaths having occurred from them. I think we can congratulate ourselves on the healthy condition of the city—the rate for last month was only 11.22 per one thousand inhabitants.

Respectfully,

BEN. C. MILLER, *San. Supt.*

Chicago Mortality Report for February, 1875. Reported by

Dr. BEN. C. MILLER, Sanitary Superintendent.

Accident, crushed	4	Apoplexy	4
" by fall	1	Asthma	2
" by railroad	2	Ascites	1
" by scalding	1	Atelectasis pulmonum	1
Abscesses	1	Bowels, intussusception of	1
" lumbar	1	Brain, congestion of	6
Anæmia	4	" inflammation of	3
Angina pectoris	1	Bronchitis	10
" gangrenous	1	" capillary	9

Cancer	1	Heart, valvular disease of	4
“ of breast	1	Hydrocephalus	6
“ of liver	1	Inanition	8
“ of rectum	1	Injury at birth	1
“ of stomach	2	Kidneys, disease of	1
“ of uterus	1	“ Bright's disease of	2
Consumption	55	Laryngitis	2
Convulsions	66	Larynx, inflammation of	1
Croup	7	Liver, hypertrophy of	1
“ membranous	2	Lungs, congestion of	10
Cyanosis	2	“ paralysis of	1
Cynanche trachealis	1	Malformation	1
Debility, general	4	Measles	13
Delirium tremens	1	Meningitis	13
Diarrhœa	2	“ cerebro-spinal	5
“ chronic	1	“ tubercular	1
Diphtheria	7	Old age	15
Dropsy, general	3	Paralysis	1
“ pericardiac	1	Pericarditis	1
Dysentery	2	Peritonitis	5
Dyspepsia	1	“ puerperal	1
Eczema	1	Pneumonia	47
Endo-carditis	1	“ typhoid	1
Enteritis	11	Pleurisy	1
Enterocolitis	1	Pyæmia	2
Exposure	1	Rheumatism	2
Erysipelas	5	Septicæmia	1
Exhaustion	1	Small-Pox	2
Fever, puerperal	8	Spina bifida	1
“ intermittent	1	Spine, disease of	1
“ remittent	2	“ paralysis of	1
“ scarlet	7	Suicide, shooting	1
“ typhoid	8	“ cutting throat	1
Frost bites	2	Syphilis	2
Gangrene	1	Tabes mesenterica	6
Gastritis	2	Teething	1
Gastro-enteritis	2	Tetanus	2
Hæmorrhagica purpura	1	Trismus	1
Heart, disease of	1	Tumor on neck	1
“ dropsy of	2	Toxæmia	1
“ organic disease of	2	Whooping cough	2
“ hypertrophy of	1		
“ rheumatism of	3	Total	449

Premature births, 8; Still births, 66. Total, 74.

COMPARISON.

Deaths in February, 1875, 449; in January, 1875, 571. Decrease, 122.
Deaths in February, 1874, 472. Decrease, 23.

AGES.

Under one year	155	Thirty years to forty	37
One year to two	56	Forty “ “ fifty	31
Two years to three	14	Fifty “ “ sixty	26
Three “ “ four	9	Sixty “ “ seventy	21
Four “ “ five	7	Seventy “ “ eighty	10
Five “ “ ten	20	Eighty “ “ ninety	7
Ten “ “ twenty	17	Ninety “ “ one hundred	1
Twenty “ “ thirty	37	One hundred and upwards	1
		Total	449

White	438	Males	240	Married	133
Colored	11	Females	209	Single	316
Total	449	Total	449	Total	449

NATIVITIES.

Belgium	2	England	3	Poland I—Russia I	2
Bohemia	5	France	1	Scotland	4
Canada	4	Germany	45	Sweden	7
Native—Chicago	66	Holland	3	Switzerland	2
Foreign, "	161	Ireland	39	Wales	1
U. States, other parts	87	Italy	1	Unknown	4
Denmark	2	Norway	10	Total	449

Deaths daily, 16. Mean thermometer, 15°. Rain fall, 1.84 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	3	5,725	one death in 1,908
2	6	4,830	" " 805
3	19	14,861	" " 782
4	12	15,361	" " 1,280
5	25	20,078	" " 803
6	52	35,916	" " 691
7	31	31,722	" " 1,023
8	35	29,143	" " 832
9	26	31,654	" " 1,217
10	6	17,385	" " 2,897
11	11	14,022	" " 1,275
12	14	16,792	" " 1,199
13	14	17,892	" " 1,278
14	15	16,720	" " 1,115
15	43	45,545	" " 1,059
16	25	21,922	" " 877
17	23	20,777	" " 903
18	26	21,392	" " 823
19	6	4,677	" " 779
20	4	8,995	" " 2,249

396 Ratio of deaths to population in 1874, one death in 880 3-5.

No. deaths in Wards	396	Mercy Hospital	1
Accidents	8	Protestant Orphan Asylum	3
County Hospital	14	St. Luke's Hospital	3
Foundlings' Home	16	Suicides	2
Hospital Alexian Bros.	3		
Hahneman Hospital	2	Total	449
Home for Friendless	1		

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Original Communications.

ARTICLE I.

VARIOUS USES OF CHLORIDE OF ZINC.

By J. E. NICHOLS, M.D., OSAGE, IA.

This article is sooner prepared than it was intended, on account of receiving letters of inquiry from professional brethren. To reply fully to their questions, it is necessary to repeat some of the matter of former articles, for which it is hoped pardon will be granted.

For the removal of cancer or other tumors, covered by the integument, rub together *chloride of zinc* and *blood-root* in powder. Use enough of the powdered root to take up the moisture caused by the deliquescence of the zinc, so as to form a plastic, moist dough. It should be firm enough not to spread out beyond the limits desired in its application. Mould it into a sheet, from one line to one-fourth of an inch in thickness, the size and shape of the surface to which it is to be applied, first protecting the surrounding sound parts with adhesive plaster. The

paste or dough is kept in place by means of adhesive plaster. The eschar will vary in extent and depth, according to the depth of paste employed. It usually exhausts its strength in forty-eight hours. The eschar will also be somewhat greater in circumference than the surface covered with paste, for which some allowances are to be made. If the first eschar does not embrace the whole of the morbid growth, as is sometimes the case, apply fresh paste to the remnant, protecting the edges of the wound with lint. The agent takes immediate and more extensive effect if there is no intervening integument. In this second application it may be better to employ Dr. Marsden's arsenious mucilage as follows:—*R.* arsenious acid, 3 ij; mucilage gm. acacia 3 j. *M.* Ft. a stiff paste. Apply this to not more than one square inch of surface, press lint over it, and when dry, cut off the surplus lint with sharp scissors. This has a more especial election for the morbid structures, not materially affecting the healthy tissues. After removing either of the above pastes at the end of forty-eight hours, and until the eschar comes away, poultices are the best dressings, after which simple cerate, or, in small wounds, court plaster, is all that is required until perfect cicatrization occurs, which usually is very speedily. In my experience, I have never made a wound with chloride of zinc that has not healed quickly and kindly, even when an indolent ulcer was acted upon. It is its quality of arousing healthy inflammation in the parts surrounding the eschar that it produces, that first led me to employ it in other cases than tumors, or cancer, some of which I give below:

Mr. N. Aldrich, a strong laborer, about twenty-eight or thirty years of age, called upon me in March, 1872, with chronic arthritis of the left knee, arising from an injury sustained in 1864, while in the U. S. volunteer service. He had been under the treatment of several good surgeons, only one of whom benefited him any, which he did by the use of a very perfect extension of the knee;

but a cure seemed to be impossible. I ordered the reapplication of the extension, and exhausted all the usual palliative modes of treatment. He finally became so anxious to be relieved from his terrible pain, that he was willing to undergo any operation, and even importuned me for several weeks to amputate above the knee. *Erichsen*, in his work on Surgery, advises the use of the actual cautery in some cases of arthritis. He says, "the patient having been anæsthetized, a cauterizing iron heated to a black-red heat, should be rapidly drawn over the diseased articulation in a series of parallel lines, across which an equal number of cross bars are again drawn, so as to char but not destroy the skin," (p. 615 of his second edition). While considering the advisability of employing this, it occurred to me that the zinc paste would answer as well, and would save employing the anæsthetic, and avoid the censure that such an operation would be likely to bring upon a country practitioner if not successful. Drawing the paste out in strings about a line in diameter, I laid them upon the joint, parallel with the limb, and about an inch apart, over the entire swelling, except in the popliteal space. I kept them in place by means of lint and a bandage for about twenty-four hours. They created great swelling and inflammation of the skin and subcutaneous tissues, the pain of which, the patient claimed, was many times compensated for by the absence of the pain in the joint. In places, eschars were formed, and in others, the integument seemed to be only slightly scorched. These healed in a short time, and I employed it the second time in the spaces between the old cicatrices. He was wholly free from pain after the second use of the paste, and the integument and superficial tissues were so drawn down and bound about the articulation that he has had no arthritis to this day. I met him last week, when he informed me that he had not been kept from labor an hour since my treatment, by any pain or lameness of that limb.

July 15, 1874. Mr. H., aged about twenty-two, otherwise healthy, called on me to be treated for syphilis. He had one well defined, indurated chancre upon the glans penis, and two softer ones upon the prepuce. He had been treated with nitrate of silver and acid previously, and objected to their employment now, unless it was absolutely necessary. Protecting the parts about the chancres with lint, I made use of the zinc paste, leaving it upon them about thirty-four hours. The eschars came away in three days, and I was surprised at the rapidity with which the wounds healed. I made use of a building-up treatment, and never had a case do so well before.

Samuel Ryerson, aged sixty-nine years, of good general health, consulted me November 18, 1874, with regard to an ulcer that had been on his face over fifteen years. It involved the inner half of the lower lid of the left eye, nearly all the left side of the nose, and a part of the cheek, as large as a silver dollar. He had another one below the temple, near the outer angle of the left eye, as large as a half dollar, that was not of so long standing as the other. I diagnosed it a *rodent ulcer*, or *lupus*, or the *noli me tangere*. He had consulted many physicians, both in the East and here, all of whom advised him to let it alone, as to meddle with it might aggravate it. I began the treatment of it by covering the lower half of each ulcer with the zinc paste, using one part zinc to about five parts of the powdered blood-root, allowing it to remain about twelve hours. It caused a thin eschar to form and peel off in about six days, after which I dressed it morning and night, by washing with castile soap suds, and applying pulverized *peruvian bark*, to absorb the secretions from the surfaces of the ulcers.

December 10. The ulcers are healed in over one-third their extent; but as they began to assume an indolent appearance, I applied a still weaker mixture of zinc and blood-root over their entire surfaces, leaving it on only about six hours, as the first application caused more

swelling than was desirable. The treatment was continued about the same as before, and resulted in the perfect cure of the smaller ulcer, and the reduction of the larger one to a very small point of ulceration in the inner canthus of the eye.

January 4, 1875. Make a still milder application of paste to the small ulcer in the angle of the eye, allowing it to remain six hours. This produced a very little sloughing from the surface, and only a little inflammation. The remnant of the lower eyelid, which was at first in a bad state of ectropion, is being drawn into a much better shape by the cicatrization than I had supposed possible at the commencement of the treatment.

March 25. There is only a little redness about the greater canthus, and slight ectropium of the lower lid. The puncta lachrymalis, which has opened on the surface of the ulcer throughout its career is perforate, and even the pustules that formerly came upon the face about the ulcers have ceased to appear, and, on the whole, the results are better than I had thought possible. Good diet has constituted the whole of the general treatment.

Another case, learning of my treatment of this, came from a neighboring town for treatment. He has a *rodent ulcer*, embracing both sides and bridge of the nose, with a fistulous opening one-half inch long, by one-fourth inch wide, into the left nostril. This case possessed the characteristic indurated and tuberculated points in the integument about the ulcer, having a bright red and shining appearance. He has now been under treatment about a month, the zinc having been employed as in the other case; and now the ulcer is all healed, excepting a point the size of a little finger nail, and the fistula, which will require a plastic operation to close it.

The case of Nils Anderson, that was reported as under treatment in my last article, terminated by the entire removal of the remnant of morbid growth, and such perfect filling in by granulation that an operation to restore the lip will not be needed. This could not have been

secured by the extirpation of the cancer in the usual way, in my opinion.

I have also employed a solution of zinc in acidulated water for the treatment of gleet, and various chronic inflammations of mucous membranes, with good results. In fact, I find it such a valuable agent to stimulate and to create healthy inflammation, that I should be loath to part with it as a therapeutical agent; and I am of the opinion that a fair and careful trial of it will cause others to admire it also. In its use, it should be remembered that, like many good agents, it is powerful to do mischief if carelessly handled.

ARTICLE II.

KOUMISS AS A REMEDIAL AGENT — REPORT OF CASES.

By R. L. LEONARD, M.D., CHICAGO.

While I trust the profession will not think me too sanguine in estimating the favorable results of a new remedial agent, it has been my fortune to have an early experience in the use of koumiss (fermented mare's milk) and the effect of its use has been such that I deem it proper to call the attention of the profession to a few cases which have been materially benefited by its use.

The first case, P., a babe, born at full term, and apparently healthy, weighing eight pounds. The mother's breasts secreted little or no milk, and from its birth the child was obliged to subsist upon cow's milk. For a few days it seemed to thrive, but the fifth day it vomited a good deal; an occasional ten-grain powder of the sub-nitrate of bismuth was ordered. On the seventh day my little patient was no better, and I gave aqua calcis, adding it to the cow's milk. When I called on the eighth day it was reported to be vomiting two-thirds of all the milk

taken. I ordered the nurse to give it condensed milk instead of the new cow's milk, and no medicines, and when I called on the ninth day, found that there was little or no vomiting, but on the tenth day the vomiting had increased considerably, and there was a very loose condition of the bowels. Subnitrate of bismuth was ordered in ten-grain doses every four hours, and for a day or two the child was better, but on the fourteenth day when I called, was reported much worse. The bismuth, which had been discontinued, partially, in view of the marked improvement noticeable at my last visit, was now resumed, and the dose increased to fifteen grains, but in spite of treatment, on the fifteenth day the babe retained but little of either milk or medicine, was constantly worrying, and its extreme emaciation induced me to obtain its weight, which I found to be seven pounds. On the eighteenth day the mother reported that it had vomited everything (milk and medicine) for forty-eight hours, and it seemed about dying from actual starvation, and my opinion was that it could not live another twenty-four hours unless something nourishing was retained.

In this extremity it occurred to me to try koumiss. Acting upon this idea I obtained a quart bottle of medium koumiss, and returning, had the nursing bottle filled with two-thirds koumiss and one-third hot water, and gave to the starving babe; to my utter astonishment it took the koumiss with an evident relish, emptied the bottle, and equally astonishing to me was the fact that it was retained. I ordered the mother to give all the babe would take, if retained, and on calling the next day found that it had used the entire quart, and the bowels were moving at intervals of about six hours.

On the 3rd day after commencing the use of koumiss in this case, a slight diarrhoea manifested itself, which disappeared in twenty-four hours without treatment. The babe had all the koumiss it would take from the first, improvement continued to be rapid, and at time of writing the child has used twenty-four gallons of koumiss

or an average of about three pints per day, is fat and healthy as a child can be at the age of fourteen weeks, has gone with its mother to her home in Nebraska, and in a letter received to-day she tells me that it has now been fed upon cow's milk for a week and is doing well.

The second case, Mrs. B., a lady of American birth, aged 36 years, who had been debilitated by typhoid fever, in which the stomach was quite irritable, and although the disease had a week previous passed its acme, still but little nourishment could be given on account of this excessive irritability. Koumiss was ordered in its purity, and was acceptable to the stomach; the recovery of strength was rapid, and the koumiss was discontinued in two weeks.

The third case, Mrs. O., an American lady, aged 43, who had been afflicted with dyspepsia for many years, and for the past ten of which her diet had been confined almost exclusively to oatmeal and her drink to very weak tea, as these were the only things that would remain unvomited. She had, as such patients usually do, visited physicians of eminence, and was during the past year very feeble and confined to her bed full half the time, simply because she was too weak to sit up. I had used koumiss in these other cases of irritable stomach and extreme emaciation and thought it advisable to try it in her case, so ordered it taken gradually for a day or two, then all she could take, to the exclusion of other food and drink. In two weeks she was much improved, so much so that she was not only able to sit up, but to take a broom and sweep the house, an exercise she had been totally incapacitated for during the whole of the last seventeen years. After three weeks, she was able to go for her own koumiss, walking a distance of one and a half miles on that mission every few days, and at present, after two months' use of the remedy, has so far regained her digestive power that she requires but little koumiss and can eat beefsteak and partake of the usual diet of her family table.

The fourth case, J., is a babe, aged six weeks, at the time of my first visit, which was depending upon the bottle, the mother having no milk in the breasts.

When I called, the babe, a little puny thing, seemed as if it were gasping for its last breath ; it was extremely emaciated, and for twenty four hours up to that time had been unable to nurse the bottle, and had received an occasional drachm of milk from a teaspoon ; the bowels were moving every hour, and it had retained scarcely anything for a day or two. I had some doubt as to whether the babe would live until the messenger could procure koumiss, let alone being benefited by it. A spoonful was put into its mouth which was with difficulty swallowed, soon it was followed by another, and so on at short intervals for four hours, at the expiration of which time it took the koumiss from the bottle, and from the very moment of the administration of the first spoonful to the present time, a period of nearly two weeks, its improvement has been exceedingly rapid, and it is now quite strong and apparently healthy.

I might mention another case, in which Mrs. S., a lady aged about 25 years, debilitated by a miscarriage which was accompanied by excessive hæmorrhage and succeeded by a three months' illness which left her in an extremely anæmic condition, which refused to yield to quinine, iron, strychnia and other tonics, that upon the introduction of koumiss to the treatment of the case, improved rapidly, and in three weeks so far recovered as to be discharged cured.

It is my candid belief that in koumiss the profession has a valuable acquisition to the list of remedies, and while I have dwelt in detail, upon the report of these cases, selected from my experience during the last three months with about fifty gallons of medium koumiss, I am satisfied that my success is not that kind which is attainable only in the hands of the writer, but may be duplicated by my professional brethren who have cases of extreme debility or emaciation to deal with, particu-

larly where the stomach is in an irritable condition without active organic disease; and trusting that the report of these cases may be of service to the readers of the JOURNAL, I submit it to their consideration.

Progress in Medical Sciences.

ARTICLE I.

PROGRESS OF OBSTETRICS.

By E. WARREN SAWYER, M.D.,

LECTURER ON OBSTETRICS, RUSH MEDICAL COLLEGE, CHICAGO.

1. Gum Cutting. By C. E. BUCKINGHAM, M.D., Professor of Obstetrics, Harvard Medical School. (*Boston Medical and Surgical Journal*, January 21, 1875.)

2. Cephalhæmatoma.

3. Vicarious Menstruation.

4. Mammary Abscess in very young Children.

5. Suspended Animation in New Born Children. (*Boston Medical and Surgical Journal*, February 18, 1875.)

6. Medico-Legal Bearing of Puerperal Fever.

1. The writer is surprised to learn, on inquiry, that many of the younger practitioners never use the gum lancet. The "let-alone system of treatment" is sometimes the best, but not in all cases, for the relief which often follows the lancing of the gum "has been more marked than that afforded by any other operation."

Almost all disturbances of the nervous system may be induced by the process of dentition; and many of these disturbances are dissipated by the free lancing of the gum. The relief which follows the loss of a few drops

of blood is especially noticed in those cases where the gums are hot and swollen and the mouth is dry.

If it is a molar which is being erupted, a crucial incision is better than a longitudinal one.

Two objections against gum cutting are often raised by "maiden ladies, who are often advisers of mothers younger than themselves": First, that the scar which will result from the incision will be a greater obstacle to the progress of the tooth than the uncut gum. In answer to this, the writer says he has never seen a case in which, if the lancet went well through the gum, down upon the tooth, there was any trouble afterward with that tooth. Even should the gum close, and the indications for cutting recur, there is no reason why the gum may not be cut again and again.

The second objection is the pretended fear of hæmorrhage. Though instances of grave hæmorrhage from gum cutting are often indirectly heard of, the writer has never yet seen an instance of hæmorrhage, or ever met with a person who had seen hæmorrhage from gum cutting, though the case may be assumed of a bleeder, so called, who might bleed to death from a cut gum, as he would also from a scratch upon the skin.

Finally, the writer believes that infant lives have been saved by timely interference; on the other hand, lives have been sacrificed by withholding this safe and simple operation.

2. At a late meeting of the Obstetrical Society of Boston, Dr. Fildes remarked that he had always been in the habit, as had his father before him, of treating the bloody tumors of the scalp with a lancet, and no harm had ever resulted from the method.

3. At the same meeting, Dr. Jackson stated that he had recently heard of a case in which the blood oozed from the cheek. Dr. Minot spoke of a woman who repeatedly menstruated from the nipples in large quantities.

4. In the number 44, 1874, of *Le Progres Medical*, M. H. Duret has referred to the late controversy upon this subject in the *British Medical Journal*. Dr. Duret cites an instance under his own observation, of an infant of about six weeks old, whose right breast became inflamed and suppurated; strangely enough, the right breast of the mother also suppurated at the same time. This coincidence leads the writer to ask what relation there was between the affection of the mother and child? Is it necessary to go back to a period anterior to the accouchement, when the blood of the mother circulated within the vessels of the fœtus?

Independently of the inflammation and suppuration of the breast, which is excited by the manipulations of the breast by some English nurses, in their attempts "to break the baby's nipple strings," a practice which Dr. Duret properly calls a *contume sauvage*, the breasts of very young infants are sometimes the seat of an inflammation, and suppuration, which may extend to the axilla, or mount even to the side of the neck.

5. This was the subject of a recent lecture at the Harvard Medical School, by Prof. Buckingham. In the blue and flabby child, even if pulsations have ceased in the cord, you may hear the foetal pulsations over the heart. Do not stop to tie the cord; let it bleed a little. Send for two pails of water, the one cold and the other a little too warm to bathe in; a child who has never attempted to breathe will often cry lustily after being plunged alternately into the cold and warm bath. But before the water has reached you, try to inflate the lungs, in this manner: first wipe the mucus from the child's mouth; take the child up in a towel so it will not slip from your grasp; hold it with the scapulæ in the left palm; extend the head fully, so as to close the œsophagus, and seize the occiput between the thumb and index finger of the left hand; apply your mouth closely to that of the child, and inflate the lungs with your breath. There is no

danger of your blowing too hard ; "indeed, unless you place a moderately dry cloth between the child's mouth and your own, you will find it difficult to inflate at all." The lungs should be inflated ten or fifteen times per minute, meanwhile alternating your efforts with the plunges into the baths. Do not relinquish your exertions till all evidences of life have disappeared.

When the child is resuscitated, place it unwashed in a blanket, without food, where it will be better, for the next twenty-four hours, than if annoyed with any further attentions.

6. The February number of the *Obstetrical Journal of Great Britain* contains an account of a midwife, a Mrs. Ingram, who had been unfortunate in meeting with a number of cases of puerperal fever, some of which had died. The coroner, after examining into the cause of death of one of her patients, notified her that she should not again practice midwifery until two medical men had certified that she might safely do so. In defiance of this warning, she afterward attended upon two women in labor, both of whom died from puerperal fever. The coroner's jury rendered a verdict of manslaughter. She was committed in default of bail, which was afterwards furnished in sureties of £200, and she was released till the next assizes at Warwick. The Journal continues: "There are several points of interest in this case. First, the question as to the contagiousness of puerperal fever, the reality of which some individuals might perhaps be found to dispute ; second, the legal right of a coroner to step in and warn an obstetrician not to attend women in labor ; and, thirdly, does not it again demonstrate the necessity of instructing midwives ? Mrs. Ingram's attainments are sufficiently manifested in her answer to the coroner, who asked her if she knew what child-bed fever was: 'I never met with it, and did not even know till Dr. Brown told me. I never had a woman done badly in my life before—never.' "

ARTICLE II.

PROGRESS OF GYNÆCOLOGY.

BY A. REEVES JACKSON, M.D.,

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1. Myo-Fibroid Tumors of the Uterus, and their Treatment by the Hypodermic Injection of Ergotine. Dr. H. HILDEBRANDT. (*American Journal of Obstetrics*, Feb., 1875.)

2. Death following the Use of Sponge Tents. Dr. DE F. WILLARD. (*Obstetrical Journal of Great Britain and Ireland*, Oct., 1874.)

3. Metro-peritonitis produced by the Use of the ordinary Female Syringe. Dr. THOMAS MORE MADDEN. (*Irish Hospital Gazette*, March 1, 1875; *American Journal Med. Sciences*, April, 1875.)

1. Dr. Hildebrandt has given us another installment of cases, showing the results of the treatment of uterine fibroids by the subcutaneous injection of ergotine; and his extended experience has not lessened his confidence in the efficacy of the remedy.

He first details six cases in which the symptoms of pain, hæmorrhage, etc., were removed, and the tumor diminished in size. Then follow eleven cases, in which but little was accomplished as regards the diminution of the tumor, but in which a material improvement of the symptoms took place; and, finally, two cases in which the treatment exercised no influence whatever, either on the tumor or the symptoms.

Dr. Hildebrandt regards as most favorable for this plan of treatment those cases in which the tumor is so soft and elastic that we have difficulty in distinguishing it by its mere consistence and shape from a dense elastic cyst. Such tumors are common in the uterus, are usually found in young women, and are attended by profuse hæmorrhages and hydrorrhœa. Tumors of this character are generally soft and spongy, and contain more muscular fibres, and are, texturally, similar to the uterus during the early stage of puerperal convalescence. Although he does not agree with the opinion lately expressed

by Prof. Spiegelberg to the effect that the complete absorption of an intramural fibroid is possible only when it is not, as usual, enclosed in a capsule, but merges directly without any boundary into the tissue, yet he admits that such are more liable to be rapidly and easily diminished and absorbed than those which are surrounded by a distinct capsule. That is to say, he does not regard the capsule which commonly surrounds a uterine fibroid as an absolute impediment to a cure, because that capsule neither prevents the uniform compression of the tumor, nor is even incapable of absorption itself.

Our author thinks that even with the comparatively small number of observations already made upon this method of treatment, we may accept the following points as conclusively established respecting the prognosis. The treatment is likely to be favorable in its results :

1. When the tumor is richly provided with muscular tissue and possesses the consistence and feel of a tense elastic cyst.

2. When the tumor is submucous.

3. When the walls of the womb are sound, capable of a vigorous contraction, not too much attenuated by dilatation or stiffened by exudation into their substance, and when there is no para- or peri-metritis present.

4. When the tumor is unprovided with a capsule and merges directly without a boundary into the peculiar tissue of the uterus, which anatomical relation of uterine fibroids may be considered most favorable to their complete cure by absorption.

The least promising cases are old anæmic fibroids, composed principally of connective tissue, such as occur in persons of advanced years ; those in which chronic inflammation or its results are present, either in or about the uterus ; those in which the uterine walls are attenuated, or the seat of inflammatory infiltration ; and, those which are subperitoneal. In all the cases belonging to these classes, no appreciable effect was produced by the treatment upon the size of the growth.

The preparation used by Dr. Hildebrandt is an aqueous extract of ergot, prepared according to Dr. Wernich's formula in Berlin. This is mixed with distilled water and glycerine, as follows: $\mathcal{R}$. Extract secal. cornut., 3 drams, in aq. destillat., 12 drams, and glycerini puri, 3 drams. Of this he ordinarily injects the contents of a full Pravaz's syringe, containing about 44 drops.*

He makes the injection into the abdominal walls over the site of the tumor, passing the point of the needle deeply into the tissues. In at least one thousand injections of ergotine made by him for various purposes, he has never seen an abscess follow, and only in three clinical cases did this occur. He attributes this immunity from abscess entirely to his mode of procedure, which consists in lifting the skin of the abdomen up in a tolerably high fold by the thumb and finger, and introducing the needle perpendicularly to two-thirds of its length into the apex of the fold, and injecting the fluid very deeply into the subcutaneous cellular tissue—perhaps even into the abdominal muscles. If the injection is made timidly and superficially, a very painful and diffused cutaneous abscess will usually arise.

2. At a meeting of the Obstetrical Society of Philadelphia, held December 3d, Dr. Willard exhibited the uterus of a woman who had died after dilatation of the cervix by sponge-tents. The patient was sterile and earnestly desired offspring, and as the cervix was very narrow a tent was introduced. This slightly dilated the canal, but as it closed up again, a larger one was tried. This produced neuralgic pains, and it was withdrawn and replaced with a smaller one. This was done on a Friday. On the following day the patient, contrary to orders, worked at the sewing machine. On Sunday the

* All the benefits of the hypodermic use of ergot may be obtained by using Squibb's new aqueous extract of ergot, which is soluble in water, free from all irritant matter, and six times the strength of pure ergot. It is carefully prepared for hypodermic use by J. P. Sharp and E. H. Sargent, druggists, of this city.

doctor found her with a tender abdomen, extreme pain, fever, etc. The tent had slipped out of the cervical canal and was found in the vagina. The patient died on the ninth day.

The *post-mortem* examination showed a small amount of serous exudation in the abdominal cavity, and an abscess in the left side of the uterus, containing about an ounce and a half of pus. The parietal layer of the peritoneum was covered with lymph. There had been extensive inflammation of the pelvic viscera; probably at first peri-uterine cellulitis, and then general peritonitis.

During the discussion which followed, four other fatal cases similar to the foregoing were related by Drs. Wilson, Hodge, Smith and Goodell. In all these cases, with a single exception, death took place after a second or third introduction of tents, and Drs. Smith and Goodell expressed the opinion that in this fact was to be found the explanation of the fatal result.

The use of tents for the purpose of dilating the cervix uteri, is unquestionably more dangerous than is usually supposed. While the degree of danger is doubtless increased by the presence of abnormal growths in the womb, and by lack of rest during the period of their use, death has occasionally occurred where the uterus was healthy, and where the patient had been kept perfectly quiet in bed. But tents are too valuable a means of diagnosis to be abandoned on account of the occasional accidents that attend their employment, and hence it is our duty to observe every precaution that may reduce these untoward results to a minimum.

One of these precautions is that alluded to above. We should endeavor to procure all the dilatation necessary by a single tent, or a single batch of tents. The first tent sets up an irritation and congestion of the cervix; its removal produces an abrasion of the mucous surface, and from this is absorbed the decomposing or septic material generated by the subsequent ones. A very excellent plan is that suggested by Dr. Goodell, at the meet-

ing referred to above. He advises the stretching open of the cervical canal by the uterine dilator, and the crowding in of the largest sponge tent possible, and then insinuating around it several small laminaria tents. In this way the required amount of dilatation may frequently be obtained by a single operation.

Tents should never be used so long as inflammation of the pelvic organs, or its results, are present. They should never be used unless in exceptional cases, immediately before or after or during a menstrual period ; and, finally, antiseptic vaginal injections, consisting either of solutions of chlorate of potassa, or of carbolic acid, should be used at intervals of three or four hours during the presence of the tent. If these precautions be taken, uterine tents may be used with at least the smallest degree of danger, if not with entire safety.

3. At a recent meeting of the Dublin Obstetrical Society, Dr. Madden related the history of a case showing that the ordinary form of the female syringe is not so harmless an instrument as is commonly supposed. The patient, while using an astringent vaginal injection, five weeks after delivery, had a sudden attack of intense uterine colic, which was followed by severe metro-peritonitis. There was almost complete collapse, accompanied by uncontrollable retching, and for several days the patient's life was in great jeopardy. A portion of the injected fluid had evidently passed through the patulous os into the cavity of the uterus, which was in a state of subinvolution, and thence through the Fallopian tube into the peritoneal cavity.

The foregoing is only one of a number of similar accidents which have been reported within the past few years, and in some of which death has resulted. No instrument is in more common use than the vaginal syringe. Physicians recommend it and patients use it without any idea of its possible danger. Dr. Madden regards it as both objectionable and imperfect ; objectionable, because of the

possibility of its producing injurious and dangerous effects from the force with which fluid may be thrown into the vagina or even into the uterus; and imperfect, because, to produce any permanent benefit by injections in a case of inflammation or congestion of the cervix uteri, for example, the injected fluid must be kept in contact with the diseased part at a certain uniform temperature for a long time continuously, and this cannot be accomplished with the ordinary syringe, on account of the fatigue attending the working of the instrument, and the irksomeness of the position necessary during its use. To obviate all these inconveniences, Dr. Madden recommends the use of a utero-vaginal irrigator, which operates on the principle of a syphon, and which may be used whenever a vessel of water is obtainable. Such an apparatus is capable of sending a gentle flow of water, plain or medicated, at any desired temperature, into the vagina, for any length of time, and without fatigue to the patient.

The irrigator recommended by Dr. Madden is essentially the same instrument that is so generally known in this country as the Fountain Syringe. Its advantages over the ordinary form of syringe are well known and appreciated among American gynæcologists.

Selections.

IMPRESSIONS OF AMERICAN SURGERY.

An Address delivered at University College Hospital, Nov. 9, 1874,

By JOHN ERIC ERICHSEN, F.R.C.S.,

Senior Surgeon to the Hospital, and Professor of Clinical Surgery in the College.

GENTLEMEN—I have been requested to give you an account of the impressions that I have formed of American Surgery and Surgical Institutions during my recent visit to the United States; and although I did not go amongst our Transatlantic brethren as “a chiel amang them takin’ notes,” and still less with any intention to “print ’em,” but solely for recreation in my autumn holiday, yet I have no hesitation in complying with this request: partly because I believe that too little is known of American surgery in this country; and partly because the opportunity is thus afforded me, which might not otherwise occur, of publicly expressing my deep sense of the great honor that was conferred on me by the most flattering reception I met with from the medical profession collectively in every part of the Union that I visited. It would be unbecoming here to do more than allude to the many friendly and cordial acts of private hospitality that were extended to me by individual members of our profession, and which have left a deep and pleasing recollection in my mind. But I may, without restraint, express my acknowledgments to the profession in America for the warm and hospitable and hearty welcome that was given to me wherever I went, east or west, north or south, from New York to Chicago, from Boston through Philadelphia and Baltimore to Washington; and for the splendid hospitalities of which I was in most of these cities on several occasions the recipient, as the guest of institutions or of the general body of the profession. I can only explain the reception I thus met with—a reception unparalleled, I believe, in the social history of our profession—on the assumption that it was not to me individually that so much honor was intended to be done, but that a compliment was thus paid to the surgical profession of Great Britain, of which I was considered the

representative, and which was thus honored through one of its members by our American brethren. But I must leave these topics, agreeable as it may be for me to dwell upon them, and grateful as the recollections conjured up by allusions to them are, and proceed to tell you, in a few words, what my general impression is of the profession, the schools, and the hospitals of the United States.

And first, as to the Profession, I may at once say that it appears to me to occupy in America, relatively to the rest of the community, a far higher social status than it does in this country. The reason for this seems tolerably obvious. In the absence of an exalted hierarchy in an established church and of great dignitaries of the law, these professions do not offer sufficient inducement for men of the highest intellectual calibre to enter them. Medicine therefore stands prominent as probably the best-educated, certainly the most scientific, and consequently, in a country where education is so widely diffused and so much regarded, the most respected, of the professions. And in the absence of all titled classes, it can socially more than hold its own in competition with the trading and financial elements which are such prominent constituents of the society of most of the American cities. Perhaps, also, the high position that medicine occupies is owing, in some respects, to the greater uniformity of practice that prevails amongst medical men in America than with us. For, just as in the Law there is no division into barristers and solicitors, so in Medicine there is none into physicians, surgeons, and general practitioners. Special aptitude, inclination, or opportunity will necessarily lead men to a greater eminence in particular departments of the profession. But the subdivision into classes and specialties, which is so prevalent here, is unknown in the United States. With the exception of hospitals for diseases of women, I know of no special hospital in any of the large American towns; and I think that no better proof can be adduced of the inutility of the multiplication of these pseudo-charities, which are too often established in order to foster private gain under the flimsy shelter of that much-worn "cloak" which "covers a multitude of sins," than this fact, that in a population larger than that of Great Britain, with a numerous, highly educated, and active profession, it has not yet been found necessary to institute such establishments.

Surgery in the United States certainly stands at a very high level of excellence. The hospital surgeons through-

out the country have struck me as being alike practical, progressive, and learned in a very high degree. In practical skill, and aptitude for mechanical appliances of all kinds, they are certainly excelled by no class of practitioners in any country. They are thoroughly up to modern surgery in its most progressive forms, and I have never met with any class of men who are so well read and so perfectly acquainted with all that is done in their profession outside their own country. It would be a great injustice to American surgeons for it to be supposed that surgical skill is confined to the large cities or to the few. On the contrary, I know no country in which, so far as it is possible to judge from contemporary medical literature, there is so widely diffused a high standard of operative skill as in the country districts and more remote provinces of the United States. The bent of the mind of the American surgeon is, like ours, practical rather than scientific; in fact, there are the same mental characteristics displayed in him that we find here—the same self-reliance, the same practical aptitude, the same *curative* instinct, which leads him to consider his patient rather as a human being to be rescued from the effects of disease or injury than as a scientific object to be studied for the advance of professional knowledge. How, indeed, can it be otherwise than that there should be such a resemblance? It is true that in traveling through America one is struck by the fact that there is a singular combination of the new and the old—of the strange and the familiar. That there are differences of a remarkable character between the New and the Old World there can be no doubt. I use the word “different” rather than “foreign,” because I feel it impossible to apply the word “foreign” to anything American. There are differences in climate, differences in the physical configuration of the country. The verdure that clothes its hills and the vegetation that fertilizes its plains are different from those that we meet with here; but man, in all his characteristics, is exactly the same. There appears to me, indeed, to be as great, if not a greater difference between the mental characteristics of an Englishman and some of the other inhabitants of Great Britain than there is between an ordinary Englishman and an American of the Atlantic cities. It may be truly said, though perhaps in a sense slightly different from that in which the poet used the words, that

“Cælum non animum mutant qui trans mare currunt.”

Those who have crossed the great ocean have changed their clime, but not their characters.

The similarity that exists between American and British surgery, and which has struck me very forcibly, arises not only from the great resemblance that exists between the American and the English character, but from two other causes which have largely contributed to this end. The Art of Surgery is in a great measure traditional. The method of doing things in surgery is transmitted directly from the master to the pupil. The American surgeon of a past generation acquired in this way the traditionary art of British surgery, and has transmitted it directly to his descendants. Surgeons of both nations drew their inspiration from the same source and drank at the same fountain of knowledge. The names of Cooper and the Bells, of Liston and of Brodie, are as familiar to the ears of American surgeons as they are to those of this country. I was much struck when visiting the oldest hospital in the United States—the Pennsylvania General Hospital at Philadelphia—by seeing over the entrance to the operating theatre the portrait of a face that I had often seen delineated in this country. At first I thought it must be that of one of the American surgical worthies of a past generation—of Physick or of Mott, of Warren or of Mutter; but on closer inspection I found that they were the well-known features of him who was in his generation *facile princeps* of British surgery—Sir Astley Cooper. Not only have British traditions thus penetrated deeply into the surgery of the United States, but the modern American surgeon derives his information from the same sources as does his British contemporary. *The Lancet* is reprinted, and is as widely circulated in the States as in this country; and I find in my own case that my pupils in America are probably more numerous than those in Great Britain. One of the great advantages—and it is a very great one—that an English writer enjoys, is that he addresses eighty millions of people, and that his works are not only disseminated throughout his own country, but, if of any value or importance, are eagerly sought after by that still larger body of readers existing in the “Greater Britain” which now encircles the globe. And if it be true, as has been said, that the judgment of enlightened foreign contemporaries is an anticipation of that which posterity will give, he may possibly have a foreshadowing of the verdict that a future generation of his own countrymen will pass upon him, in the estimate in which he

is now held amongst those who inhabit the regions beyond the Atlantic.

The mode of instruction in the Medical Schools of America is necessarily very much the same as here. But there are some differences. Thus, the course of education required is generally shorter than with us, and no preliminary examination in the way of matriculation is required before a young man can enter upon his medical studies. This undoubtedly is a great evil, and as such is much deplored by many teachers to whom I have spoken on the subject; but I am told that, in the present state of things in America, it would be impossible to sift the candidates for a profession, or to establish such an ordeal as a matriculation examination. About the systematic instruction I have nothing to say. There is no essential difference in this respect between England and America. It is everywhere much the same. Dissection is easy to be obtained, and the bodies used for that purpose are either furnished gratuitously to the students or supplied at a low cost. There is but a nominal fee required for hospital attendance. The whole system of medical education, indeed, is far cheaper than with us. The chief difference that I have observed is in the method of communicating clinical instruction. The medical schools in the principal cities of the States, especially in New York and Philadelphia, are so enormous that the classes would be too large to be conducted through the wards of a hospital. Classes numbering from 600 to 800 are not uncommon. At Professor Pancoast's introductory lecture at Jefferson College, Philadelphia, there were probably 600 students present; and at my last visit to the clinical theatre at Bellevue Hospital, New York, it was estimated that a thousand students were present. It therefore becomes necessary to bring the patient to the students, rather, than, as with us, the pupils to the patient. This is done by raising him off the framework of his bed on a small platform running on wheels, and thus carrying him without any disturbance of position into the clinical theatre, where he is examined and the case discussed. I will give no opinion as to the value of this method of teaching in medical cases, but in many surgical cases it appears to me to be far more useful than that which is generally adopted in this country. The surgical disease or injury can be more readily displayed in this way to a large body of students, than it can when they are crowding round a bed, standing in one another's way, and often hampering the pro-

ceedings of the surgeon. There is one peculiarity in the mode of instruction in American hospitals which deserves mention. It is this: that each surgeon of the hospital often only serves for a short period of the year—four to at most six months; each of his colleagues in rotation taking up the practice and the clinical teaching during the remainder of the term. The advantage of this system is, that the teacher is not exhausted by continuous work, but returns with refreshed energy to his duties.

The Hospitals in the United States are, as with us, supported by voluntary contributions or by endowments from wealthy benefactors. The Americans are munificent in their charity, and hence these institutions are numerous and well organized. America has two sets of hospitals, the old and the new. Like England in some of its larger towns, it is still embarrassed by the hospitals erected in pre-sanitary days, under systems of construction which time, experience, and the advance of scientific knowledge have proved to be erroneous, in which septic diseases are readily generated and become largely destructive to the patients. These institutions are, however, undergoing a process of conversion which will speedily do away with many of the evils inseparably connected with such buildings. The Americans learned a hard lesson in the deadly struggle of the War of Secession—a lesson which is not likely soon, if ever, to be forgotten by so practical a people, unfettered by old prejudices and preconceived opinions. The lesson to which I allude was this: that wounded and injured soldiers could only safely be treated in the open, in hut or barrack hospitals. This lesson has been taught to Europe by the more recent experiences of the Franco-German war, with what results in the future yet remains to be seen. That the barrack or hut system is superior to any other for surgical cases there can be no question. The misfortune is, that in large towns, where ground is expensive and difficult to be procured, this system is, owing to the space required, not easy of adoption. There are also certain obvious inconveniences connected with it in those cases in which clinical instruction is required to be carried on in the hospital. The problem, then, to be solved in the construction of modern hospitals in large cities appears to be, how to combine the best condition for the patient with economy of space and proper facilities for the student. This problem is in process of solution in America. Indeed, it has, I believe, already been satisfactorily solved.

The new hospitals in the United States are generally built upon a uniform plan, having a central building for the administrative department, and wings for the reception of patients. This is the general plan of the construction of such hospitals as the Presbyterian, Mount Sinai, St. Luke's, and others at New York; of the Episcopal and the New University Hospital at Philadelphia,—and is in accordance with the best principles of hospital construction as practiced in Europe. But these hospitals, magnificent in construction and in all their appliances as some of them are, have not been found sufficient to satisfy the sanitary requirements of American surgeons. Accordingly the barrack system for surgical cases is now being adopted. It is proposed to erect, in the gardens of the Bellevue Hospital at New York, a detached barrack building for the reception of cases of surgical operation and injury. And a similar detached ward will be constructed in connection with the Hospital for Women, where, under the energetic action of Marion Sims and of Emmett, the number of operations has increased very greatly of late years. At the Presbyterian Hospital in Philadelphia such a building is in course of erection, and will be completed by the commencement of next year. At the Roosevelt Hospital, New York, without exception the most complete medical charity in every respect that I have ever seen—a hospital the construction of which reflects the greatest credit upon its designers,—in this hospital, which is constructed on the plan of a central administrative department, with lateral pavilions, there is a large detached barrack-ward erected in the garden, having no communication with the general structure except through an open corridor. This barrack building or ward is devoted solely to the reception of acute surgical cases. It consists mainly of one large ward, containing thirty-six beds, arranged two and two on either side in the interspaces between the windows. It has an open basement, and a large ventilating space between the ceiling and the roof; and every appliance that modern science can suggest, in the way of securing efficient ventilation, cleanliness and warmth, has been expended upon it. This ward, filled with surgical cases, has now been opened for nearly three years; and I was told by Dr. Weir, who kindly took me over it, that during that time there had only been one case which was supposed to be pyæmic—a case of so-called “pyæmic meningitis” following urethrotomy; any way, a case of blood-poisoning probably rather from

self-infection than from external contamination. In addition to this magnificent barrack-ward there is in the gardens attached to the Roosevelt Hospital a separate hut for the reception of erysipelas cases that may be brought to, or might accidentally develop in, the institution. The Roosevelt Hospital appears to me to be a model that might with great advantage be copied in this country, especially in those towns where it is becoming necessary to destroy pyæmia-infected infirmaries and to construct new hospitals. It is a perfect model for a hospital of from 150 to 250 beds; and the plan admits of its indefinite augmentation by the addition of pavilion wings and barrack-wards.

But admirable as this institution is, an attempt has already been made to improve upon it. The American surgeon, as I have already told you, is progressive. He invariably tries to go from good to better. He will not remain content with those appliances and means which might have been sufficient for a past generation, but are no longer equal to the requirements of the present day. Dr. Billings, of the United States army, one of the most learned and advanced surgeons of the day, is superintending the construction of a hospital at the "Soldiers' Home," near Washington, a magnificent establishment, the Chelsea of America. There is no barrack or hut attached to this hospital, as it is intended for chronic cases only; but, should occasion require, such a building might easily and cheaply be run up in connection with it. I will mention to you some of the principal points that Dr. Billings is carrying out in connection with this hospital, as they are, I believe, quite novel in this country, although some of them have been adopted in the more recently constructed institutions in the United States, which I have already mentioned. The points are these:—The hospital, like all modern American ones, has a central administrative building and two wings or pavilions for the wards. It is three stories high. The central administrative building contains the staircase, lifts, furnace-chimney and air-shafts. The basement story throughout the building is open; and the remarkable point in the construction of the hospital is this, that all the domestic offices, such as the kitchens, laundries, etc., are at the top of the building; under the roof on the third story. In this way there is no possibility of contamination of the atmosphere of the hospital from these domestic sources. The first and second stories of the pavilions are occupied

by the wards. The walls are parianized; no angles are left in them to harbor dust and dead air, but they are carefully smoothed and rounded off. The ventilation of each ward is independent, and separated from that of the main centre building, and of every other ward. The waterclosets and lavatories, which will be of the most modern construction, also possess an independent system of ventilation. The system of ventilation is briefly as follows:—There is a large brick air-shaft about six feet square, running up the centre of the administrative building, through the middle of which an iron flue ascends, carrying up the smoke and the heat from the furnace below, which is used for heating water that is required for warming the house and for the working of a small steam engine employed for the general purposes of the establishment. The air in the brick shaft is thus always kept warm, and an upward current is established. Into this main shaft, lateral air-shafts, about two feet square, run from each ward. They lie between the floor and the ceiling, communicating with the ward by traps, which can be opened or shut at pleasure, and so arranged that the air can be drawn from the top or bottom of the wards as may be required. Fresh air is pumped into the wards through a large air shaft opening 200 feet from the hospital, into which the air is driven by a fan worked by a small steam engine, 5,000 cubic feet per bed per hour being thus thrown in and passed through the wards. In winter the air can be warmed by passing over coiled hot-water tubes; in summer it can be cooled by being iced. The isolation of each ward is complete. It is effected by means of a transverse corridor stretching across the whole depth of the building between the ward and the central compartment, open at both ends, and shut off from the ward by double swing doors.

In all the modern hospitals that I have visited in the United States, I have been particularly struck with the extreme attention to cleanliness in all that concerns baths, lavatories, and waterclosets. These appliances are as perfect as they are substantial, and as ornate as are to be found in the best private houses. They are invariably carefully isolated from the wards. Great attention is also bestowed upon the disposal of foul linen, which, as a rule, instead of being carried through the building, is conveyed directly from the ward down a separate lift in the central department. The laundries also are models of cleanliness, and generally detached from the main build-

ing. The whole of the washing of the clothes, drying, etc., is rapidly done by steam machinery. Hot air chambers are also provided for the rapid drying of damp ward linen. The floors are of hard wood, and are dry-rubbed. Fire-proof staircases and hydrants having a continuous water supply are ready in case of emergency. In many hospitals there are spacious wooden piazzas or verandahs running round the building, and communicating directly with the wards, for air and exercise in summer.

There is a peculiar system adopted in many of the modern American hospitals—having private rooms for the reception of patients who can afford to pay. The charge for these rooms varies from two to five dollars per day. The patient is under the care of one of the medical officers, who receives his fees as he would in an ordinary private attendance. The system is well suited, in cases of sudden emergency, to a country in which there is so large a floating population as in the States, but it is also adopted in cases of chronic disease, as a matter of convenience by many who come from a distance for operation or treatment.

Surgical practice in America does not differ in any very essential respects from that adopted here. There are necessarily some modifications, and many ingenious appliances; but essentially there is no greater difference between American and English surgery generally than is to be found between the practice adopted in any two London hospitals.

The treatment of wounds is sufficiently simple, and presents nothing peculiar. I observe that American surgeons are careful about the drainage of wounds, and employ drainage tubes or similar appliances freely.

“Antiseptics” do not appear to be much, if at all, employed; at least, in a methodical form. Carbolic acid, in the form of lotion or wash, is commonly used. Indeed, antiseptics are not so much needed in the American hospitals as in ours. The object of antiseptics is to prevent the contamination of a wound by septic impurities from without. These sources of contamination do not exist in such hospitals as those I have been describing to the same extent that they do in less perfectly constructed and less hygienically conducted establishments, and hence antiseptics are proportionately less needed. In America it is attempted to accomplish by improved construction of hospitals, and by close attention to hygienic requirements, those great results which we are here driven to attain by “anti-

septic" methods of treatment. In consequence of the ignorance in all matters that relate to the hygiene of hospitals that prevails among the architects and managers of these institutions, an undue burden of anxiety, responsibility and care is thrown upon the surgeon, who is now unceasingly engaged in combating septic disease; and in order to keep down that rate of mortality which is the direct consequence of septic hospital influences, he is driven to the employment of elaborate and complicated methods of antiseptic treatment. Cleanliness in its broadest sense is the best and most efficient antiseptic. If the constructors and conductors of hospitals were acquainted with or would adopt those hygienic rules on which hospitals should be built and managed; if hospitals were not overcrowded; if the system of ventilation was perfect; if there was a continuous water-supply, and a proper isolation of wards and distribution of patients, the causes of septic diseases would not be generated. Those foul and filthy-begotten diseases, pyæmia and hospital gangrene, would disappear, and antiseptics, in the absence of septic influences, would become unnecessary. Contamination of hospital air would be prevented; we should not, as now, under defective hygienic arrangements, first allow the pollution to take place, and then be driven to the use of antiseptics in order to prevent infection of wounds by the already septic-laden atmosphere. Under the present system we begin at the wrong end. Instead of preventing the possibility of atmospheric contamination by perfect hospital hygiene, we allow the septic poison to be engendered, and then, before it can be implanted on the wound, seek to destroy it by the employment of chemical agents.

With regard to Anæsthetics I have little to say. Ether is invariably used at Boston, and is preferred to chloroform by many hospital surgeons in other American cities. I saw it given in some operation cases at the Massachusetts General Hospital, which has the great honor and privilege of being the institution in which anæsthesia was first employed in any surgical operation; it was administered here on a sponge, without any apparatus or complicated contrivance.

Except in Boston the Museums are still in an undeveloped condition. That of Dr. Mott, at New York, was unfortunately destroyed by fire; but Dr. Wood, with characteristic energy, is trying to establish one at Bellevue. At Philadelphia the splendid collection of Hyrtl's injections have lately been acquired by purchase. But there

is one museum which is so unique, so admirably arranged, and so interesting, that I must direct your attention to it for a few minutes. It is the Museum of the Army Medical Department at Washington. This magnificent collection, illustrating not only every possible variety of gunshot and arrow injury, but also those diseases which are more fatal than the bullet to an army in the field or camp, has, under the able superintendence of Surgeon-General Barnes and of Drs. Otis and Woodward, been most admirably arranged and catalogued. It occupies a building that has a melancholy interest connected with it, as being the theatre in which President Lincoln was assassinated by Booth in 1865. The collection itself is well known in Europe through the medium of those beautifully illustrated and ably collated medical histories of the great War of the Rebellion which have been published under the superintendence of the Medical Department of the United States Army. Many of the specimens in this museum are quite unique. I would especially refer to a series illustrating splintering of the inner table of the cranium without fracture of the external table consequent on contusion of the skull; the splitting of conical bullets against sharp edges of bone; a collection of foreign bodies, including arrowheads, forming the nuclei of calculi extracted from the bladder; and a remarkable series of specimens of injuries of the bones inflicted by arrow-wounds in Indian warfare. To the physician the collection of diseases of the large and small intestine, resulting from dysentery, diarrhoea, camp fevers, typho-malaria, etc., is most interesting. The preparations have been admirably put up by Dr. Woodward. In this collection will be found some very interesting specimens of resection of joints and bones after gunshot injury. I saw one patient in whom the head of the humerus and several inches of the shaft—in all, seven inches of the bone—had been excised. He was now a porter in the museum, had a most useful and well-developed forearm and hand, serviceable for every purpose. There was not only the preparation, but the living example of this triumph of conservative surgery. The case illustrates the important fact that the upper end of the humerus may be resected below the insertion of the deltoid and yet a useful limb be left. I saw another case of an officer who had lost about four inches of the shaft of the humerus, and in whom the limb was equally useful. In fact, American surgeons are very skilful in the management of resections. Sayre has removed the head of the

femur fifty-two times, and in his wards I saw some admirable results of the operation, due in a great measure to the very careful after-treatment to which he subjects the patient, and on which he lays great stress.

I have thus given you a very brief sketch of some of the impressions that I formed of our profession during my recent visit to America, and in so doing I have purposely, as far as possible, omitted mentioning the names of American surgeons, because I felt that there are so many so highly distinguished that it would be invidious and perhaps unjust to make a selection of a few amongst the juniors, and amongst the seniors it would be needless to name to you such men as that Nestor of American surgery, Gross, or of Pancoast, of Philadelphia; of Van Buren, Wood, Parker, or Sayre, of New York; Bigelow or Hodges, of Boston; Smith or Johnston, of Baltimore. I can only say that the surgical profession in America contains a phalanx of men alike distinguished for their skill and their knowledge, at least equaling what any European country can produce. And, in conclusion, I would advise those amongst you who wish to see and study the practice of surgery elsewhere than in the school in which you have been brought up in this country, who are not content throughout their lives *jurare in verba magistri*, to run in the one professional groove in which they have been launched, but who unfortunately have not acquired that fluency of the speech of Germany or of France that would render a residence in those countries profitable for the purposes of study, to take a trip across the Atlantic—a voyage in itself interesting, amusing, and health-giving,—and to spend a few months in visiting the great hospitals and schools in the cities of the United States of America.—*London Lancet*.

CASE OF ANEURISM OF THE ABDOMINAL AORTA

SUCCESSFULLY TREATED BY LARGE DOSES OF IODIDE OF POTASSIUM.

By THOS. M. MATHEWS, M.D.,

Mount Enterprise, Rush County, Texas.

During the past winter I was called to attend Mrs. W., æt. 38, married some twelve or fifteen years, but had never had any children. I failed at the time to detect any cause for her general ill health, but in April last I discovered a large aneurism of the abdominal aorta, which on close examination I found to extend from under the sternum obliquely downward to below the umbilicus.

Having been taught that such a condition was necessarily fatal, I should have given the case up as such had I not seen the article, on page 539 of the *Amer. Journ. of the Med. Sciences* for April, 1874, by Dr. George W. Balfour, on large doses of the iodide of potassium in such cases. As a *dernier ressort* I determined to give the drug a trial. I at once put the lady upon twelve and a half grains dissolved in the syrup of sarsaparilla three times a day, and increased the dose each day till it reached fifteen grains. I then gave fifteen grains four times in the twenty-four hours. *My patient began at once to improve*; the large doses seemed at first to irritate the stomach a little, but this soon passed away. When I began the use of the remedy the lady was confined closely to her bed; could not sleep unless under the influence of chloral; now, five months have passed, she is able to be up nearly all the while; sleeps without the soporific; rides about, even on horseback, a good deal, and is apparently in very good health. The aneurismal thrill and the bruit, once so distinct, are nearly absent, though the remains of the "sac" can be distinctly felt, yet very much smaller than it was at first. I used nothing but the iodide of potassium, except during June, when I gave, between the iodide, doses of fl. ext. ergot, 3 j, and tr. digitalis, gtt. v. I have kept up the use of the iodide steadily till now, except for two weeks; at present I am giving iodide of potassium, gr. v, and carbonate of ammonia, gr. iij, three times a day.

Believing that in the potassic salt we have a remedy which will in a very great measure control, if not cure,

this disease, which was formerly believed to be incurable, and hoping that others may be induced to try the remedy, I submit it to the consideration of the profession.

A STRYCHNIA EATER—STRYCHNIA AN ANTIDOTE TO ALCOHOL.

The newspapers contain an account of a man residing at Gilroy, Cal., who is in the habit of using strychnia in enormous quantities to counteract the effects of drunkenness. Not wishing to give currency to a statement on mere newspaper authority, we wrote to Dr. H. C. Morey, of Gilroy, whose name was mentioned in connection with the matter, asking him to send us an authentic report of the facts of the case. In answer to our request, Dr. Morey kindly furnishes the following statement.—[Ed. *P. M. & S. Journal.*]

GILROY, March 15, 1875.

Your letter of inquiry in reference to my personal knowledge of the reported strychnia eater, is at hand, and I hasten to reply. The individual in question is a man about fifty-two years of age, about five feet eight inches in height, and weighs about one hundred and fifty-eight pounds; dark complexion, very plain in appearance, very eccentric and peculiar in his habits, and always keeps his own counsel; has a good intellect, but a limited education.

I first became acquainted with this man in the fall of 1861, and soon learned of his habit of eating strychnia, after a long and continued debauch, and in a condition bordering on delirium tremens. The first time my attention was particularly called to it, he wished me to give him a bottle of strychnia, which I did at night about bed time. He took the bottle, pouring the strychnia into his hand, and threw it into his mouth as carelessly as though it were salt; and, in the course of half an hour, not feeling the effects from it that he wished, he repeated it, and continued to do so until he became perfectly sober. The quantity required would correspond to the length of time he had been drinking, and the quantity of whisky he had drank. I was struck with the wonderful effect it had to so completely sober him, and leave his system so entirely free of any nervous disturbance, and without the reddened and bloated appearance of the face, the dull,

heavy eyes, and irritable stomach of the drunkard. After a two weeks' drunk, with all the appearances of approaching delirium tremens, he got up in the morning with his mind clear, his eyes bright, his skin clear and fair, and with all the appearances of a man in perfect health and vigor, and ate as hearty a breakfast as usual, and went to his work as though he had never taken a drop of whisky in his life. My curiosity being excited at what seemed so unaccountable an occurrence, I began questioning him as to when he commenced its use, and what induced him to take it, but found him very reticent, and have not, to this day, ascertained the causes that first led him to its use. All he will tell is that he commenced its use in 1856. From 1861 to 1867, I saw him very frequently, and almost as often have seen him take the strychnia, until it ceased to be a curiosity, except to study its physiological action. In every instance when he took it, every appearance of dissipation would disappear in a very short time. Whether *strychnia* is an antidote to alcoholic poison, and *vice versa*, was a study for which I could find no authority to guide my conclusions.

From 1867, I did not see him until the month of November, 1874, when he came to this place and called on me for strychnia, as of old. I told my clerk (Mr. Martin) to give him all he wanted. He gave him a bottle, from which he took about twenty grains. In an hour he was all right, and sober as ever. This caused Mr. Martin to write the article you can find in the "Druggists' Circular" of December, 1874, and from that article arose the newspaper articles.

I have experimented with strychnia and *nux vomica* as an antidote to the effects of alcohol, and invariably with beneficial results.

SPINAL ARTHROPATHIES.

By S. WEIR MITCHELL, M.D.,

Member of the National Academy of Sciences.

It has been my good fortune within the last two years to meet with a number of cases of disease of the joints of the legs, associated in each instance with atrophic states of limited groups of muscles, and offering more

or less distinct clinical evidence of being due to spinal disease. I shall have occasion, as I proceed, to show how these cases differ from any as yet described, both in their early symptoms, and in their more favorable prognosis, but I shall perhaps make clearer my meaning, if first I call attention, however briefly, to the history of spinal and neural arthropathies, a subject which owes its best study to American and French students. The history of spinal arthropathies is well told by Charcot, in his *Leçons sur les Maladies du Système Nerveux*, Paris, 1872-73, p. 100 et seq. This author distinguishes joint lesions of spinal origin as of two varieties. Those which are acute or subacute and are accompanied with redness, swelling, and sometimes with more or less violent pain. The second class he describes as chronic, of slow growth, and, as I shall point out, as being remarkably different from the first-named disorders.

The history of this subject is somewhat interesting, and the more so, because to an American physician belongs the long-forgotten credit of the first discovery that "an obvious spinal cause may produce a rheumatism characterized by heat, pain, redness, and tumefaction." The quotation is taken from the second paper on rheumatism by my father, the late Dr. John K. Mitchell. In his first essay he described cases of Pott's disease, in which, below the diseased region, there were acute inflammations of the joints, which proved amenable to treatment directed to the point of spinal lesion.* M. Charcot, *op. cit.*, pp. 100, 101, in acknowledging the first mention of these facts, adds, correctly, that this cause of arthropathies is rare, and, apparently ignorant of Dr. Mitchell's second paper,† says that traumatic lesions of the cord are more often the parent of joint disorders, and refers to Gull‡ for instances of spinal commotion as competent to occasion a like result. Until in my work on injuries to nerves I recalled attention to the true author of this clinical discovery, Gull has usually had credit for being the first original observer of these interesting facts, while actually the credit is due to the American author. In his second paper Dr. Mitchell describes the very curious case of Dr. Parker, of Elkton, Maryland, in October, 1831. This gentleman, who had previously had rheu-

* Am. Journ. Med. Sci., 1831, p. 55.

† Am. Journ. Med. Sci., 1833, p. 360.

‡ Guy's Hosp. Repts., 3d series, t. iv.

matism, was thrown from his carriage, and, falling on his back, was instantly paralyzed slightly in his arms, but totally in his lower limbs. The next day he had swelling, pain, redness, and heat in the joints of the hands and wrists. These symptoms were thereafter aggravated by pressure upon the seat of injury in the spine, but relieved by the application of certain remedies to the spine. They shifted their place from joint to joint in the upper limbs, but did not affect the legs.

In 1846, Dr. Scott Alison* described very clearly the arthropathies which occur in hemiplegia, but incorrectly ascribed them to the lithic diathesis under which he presumed his patients to be suffering, and to which he conceived all such cases must be due. Since then, Brown-Sequard, Charcot, and the author, as well as some others, have recalled attention to hemiplegic arthropathies. Like forms of joint disease have been seen in myelitis, and as results of spinal tumors, while in locomotor ataxia, Charcot has delineated with great fidelity a more chronic but not less troublesome form of joint disease.

According to Charcot, similar lesions have been seen in progressive muscular atrophy by Patruban, Remak, and Rosenthal, but I have been unable to procure the papers referred to. Finally, in 1864, I described, in conjunction with Drs. Morehouse and Keen, the joint diseases caused by injuries to nerve trunks, and again and again since I have illustrated anew this clinical sequence, by numerous reports of cases of manifold forms of nerve injury.

The pathological mechanism of the various neural arthropathies is clear only up to a certain point, beyond which all is as yet obscure. It has been made most probable, that all the spinal arthropathies are due to disease of the gray matter of the anterior cornua of the cord. It has been shown that this disease of the gray matter is not caused by the inertia to which some forms of spinal disease condemn the patient, and that neither in these cases are the peripheral nerves at fault. It has also been suspected that the cerebral arthropathies are caused by a descending sclerosis finally involving the anterior tracts of gray matter in the cord, but as to this I have a reasonable doubt, owing to the very early date at which I have sometimes seen joint lesions follow a cerebral hæmorrhage,

* *Lancet*, 1846, vol. 1, p. 227.

and to the suddenness of production, and the great generalization of the joint lesion in some of the same class of cases. It has been remarked that the joints swell from fifteen days to three months after an apoplectic attack, coincidentally with the coming on of the "late rigidity," which we now commonly ascribe to descending sclerosis. I have, however, again and again seen the joint lesions come on earlier, and without any muscular rigidity, and I have also seen them get entirely and rapidly well, which does not look as if they could in these cases have been due to sclerosis. Thus in one case, they came on the day after an attack of left hemiplegia, in another on the third day.

The local peculiarities of most of the spinal and cerebral arthropathies are not such as enable the most acute clinical observer to distinguish them from some of the ordinary types of rheumatism, a fact which certain authors have frankly admitted. The general clinical characters, says Charcot, which differentiate them from common rheumatism of joints, are their limitation to the joints of the members afflicted with palsy, their relation in time to hemiplegia, the coexistence of other trophic troubles; but, if we begin by suspecting that some at least of our general rheumatisms may be of spinal birth, these would be only points in our favor, and the cases of Pott's disease in which remote joint lesions follow it, without palsies, would enable us to believe that such a spinal condition from disease might sometimes exist as would give rise to rheumatic joints without the concurrent existence of other troubles more palpably of neural origin. Moreover, it has occurred to me twice, to see cases of chronic rheumatism following acute rheumatism where an apoplectic attack produced a few days later an enormous exaggeration of the joint disease on the palsied side, so that there is something in the status of a palsied limb which favors the increase of an already present rheumatism.

Yet, however he may differ as to whether rheumatic fever be ever a spinal disease, all pathologists now admit the existence of joint disease distinctly due to neural lesions, but as to the mechanism of the production of these arthropathies, we are still at fault. Our discovery of arthropathies caused by injury of nerve trunks, seemed to promise to make the research more simple, but as yet it has done little to aid us. It has been made clear, however, that in these, as probably in central lesions,

they are due rather to irritative states than to absolute defects of power. It has been shown that they are caused neither by vascular palsies nor by vasal spasm, nor yet by inertia, which is, as we know, competent to cause, in limbs long at rest on splints, certain chronic forms of joint disease. I have certainly seen neuro-traumatic joint disease break out suddenly and with terrible severity within three days of a nerve lesion, which but slightly affected either motion or feeling, and which certainly gave rise to no atrophies, so that it also seems unfair to attribute them to defects of nutrition in this sense or in this direction.

I have elsewhere pointed out how curiously even very slight lesions of nerves affect the cutaneous secretions, and it seems fair to infer that disturbances in the chemical balances of the deeper tissues may likewise arise from as slight neural causes. How far these may also come from central disease, and how competent in either case they may be to trouble the life of the tissues and occasion local inflammations, we can hardly yet determine. It is but an hypothesis, yet of some value as giving a fresh direction to research. It is indeed hardly possible to refrain from speculation upon a subject at once so open and so interesting.

I have seen but one case of entire annihilation of nerve influence in a limb, and in this all the nerves were cut save the fibres which pass with the vessels. No notable joint lesions followed the section. The sections of single nerves never altogether insulate neurally a part even of a limb or lesser member,* but it is commonly the partial sections of one nerve which cause joint disease, and then arises this curious question: Do they act directly along the injured peripherally distributed fibres and thus affect the joint, or does the local irritation influence the centre, and through it and the still entire nerve threads act upon the joint to disorder its nutritive life? I incline to this latter opinion, which is favored by various reasons, and especially by some of the cases I have elsewhere reported. But if this view be taken and we come to conceive of a state of the centres in which there were disturbance from without competent to put them in a state to cause joint lesions, we are readily made able to add

* Section of a nerve always leaves the joint in relation with other undestroyed branches.

another step in belief, and conceive that sometimes these centres may without peripheral irritations be thrown into such a state as to occasion these lesions.

Hitherto, in all of the reported cases of neural arthropathy, there has been a passive central or peripheral nerve lesion, and usually there have been also precedent symptoms not related to the joints, such as atrophy, paralysis, anæsthesia, or hyperæsthesia. In three of the four histories which I shall here relate, the joint lesion came first, existed alone for a time, and was followed by other nutritive, sensory and motor conditions of the limbs, which revealed the spinal column as the organ upon which the whole chain of phenomena depended. Surely this is a fact of great pathological significance, since it is open to suspect that if the spinal lesion had been checked at a certain point we might have had only the joint disease, or such slight derangements in the way of numbness or lack of power as might readily escape notice, or as often are seen by acute observers in rheumatisms suspected by no one to be of neural birth. One possible fallacy may exist to mar this view of the pathogenesis of some arthropathies, and to it I shall by and by refer.

CASE I.—Mr. B., of E. Pennsylvania, consulted me last year in the autumn, on account of a painful affection of the right knee-joint. Mr. B. was a bank officer, æt. 48, of slight figure, free from previous disease, and of untainted descent. In the spring of 1873 he was subject to severe mental and moral strain, and for some weeks to unusual exertion a-foot. In June he had slight pain in the dorso-lumbar spine, which was eased by rest. The accompanying sense of lassitude left him after a short summer holiday, but early in September he began to have pain and swelling and stiffness in the right knee, and at length was forced to remain at rest, the knee having been put in a splint. Despite pretty active treatment it grew worse, and he was led to consult me in November.

At this time the leg presented nothing abnormal save in the joint. There was no wasting, no loss of feeling or of electrical reactions. I advised absolute rest, pressure by sponges and bandage, tonics, and moderate doses of iodide of potassium. The joint was hot and largely swollen, the patella lifted by effusion, and the pain severe especially at night. He came back to the

city within a month. At this time there was pain and slight tenderness on the right of the eighth and down to the twelfth dorsal vertebra inclusive, an aching sense of distress over which ice caused a feeling of burning. The joint was in all respects better, but still swollen slightly, red, and painful and tender. The thigh and leg presented a curious change. The extensor group in the thigh was wasted at least one-half, the peroneal and gastrocnemial groups were similarly altered, but to a less degree. All of these muscles were much enfeebled, and responded only to galvanic currents of at least thirty cells, and best to ascending currents. The sensibility of the skin of the leg below the knee was much impaired, that above the knee but slightly lessened.

I was amazed to find so remarkable a change in so short a time, and was fortunate in having made previously so complete an examination as to feel sure that when first I saw the case the joint lesion stood alone.

For a few days I enjoined rest, with cut cups thrice to the spine. The local relief was great, and although no other treatment was then employed, a change for the better was seen at once in the joint. After a time I began to treat the knee with powerful galvanic currents, and the muscles with reversed galvanic currents. The most rapid improvement followed, and after thirty sittings I found that I got ready responses by induced currents which were thenceforward used every day. The splints were early laid aside, slight movement permitted, and when only some feebleness of gait remained, I employed hypodermic injections of strychnia.

After three months Mr. B. went home well. He has since had a short relapse, with a display of all the same symptoms in a lesser degree, but the same treatment readily overcame them, and a course of cod-liver oil and iron, with some changes in his ways of work, has sufficed to preserve him in health up to this date.

CASE II.—My second case was a woman, æt. 32, from Wilmington. She was at the head of a busy millinery business, and had been in good health, and free from pain. In the spring of 1873 she began to have pain in the left knee-joint, and after suffering some months, gradually grew more and more feeble as to the use of the left leg. In the autumn she applied to me, and was then in a pitiful state of pain and lameness. The joint was enormously swollen, and very painful, as well as most

curiously tender. The temperature was two degrees above that of the right knee, and the patella could be rocked on the distended joint. To my surprise, the whole anterior group of extensors of the leg was wasted at least one-half, and could not be stirred by the will or by any form of current, galvanic or induced, nor yet through the nerve trunks.

The sensibility was, however, unimpaired. The back was free of tender spots, the general health fair, but not vigorous, and there was no functional disturbance of stomach, kidney, or generative organs.

I treated this case as I had done the other, by galvanism until induction currents acted, and thenceforward by these latter. The general treatment consisted in the use of tonics and full doses of strychnia. The gain was sudden and steady, so that I was able, after a few weeks, to leave the case in the hands of my friend, Dr. John K. Kane, of Wilmington, under whose charge she continued to improve, so as within a few months to be entirely well.

It is, of course, possible that both of these cases may have been joint troubles originating without neural cause, and producing by reflected irritations muscular losses; or more directly giving rise to an ascending neuritis competent in time to occasion like results. The nerve tracks, however, were searched again and again in both cases for tenderness, and always in vain, while the spinal symptoms of the first case seem to have been distinct, so that, on the whole, I reached the conclusion that in both there was a limited spinal lesion, and if so in both (and here is their peculiarity), the joint disorder came first, and for a time stood alone.* The next case, as to the spinal birth of which no shadow of doubt can exist, enables us to feel far more sure that the two cases first given had also this origin. It has also this added value, that it was seen and studied by others besides myself, none of whom had finally any other view.

CASE III.—The subject of the following most remarkable history is the wife of a physician of distinction in

* The very remarkable wasting of muscles in some joint diseases, as of the hip, seems to be due to reflected irritations and not to mere inertia, but these wasted muscles usually react under electric currents as well as their healthy fellows.

a neighboring city—a woman of unusual energy and intelligence, and previously in good health.

On April 18, 1870, she first felt a slight sense of lameness in the left knee. It caused annoyance in going up or down stairs, in sitting or kneeling, far more than in walking. On the 23rd an examination revealed the presence of too much fluid in the bursa, and on the 24th the joint was distinctly swollen, and there were slight pains at times down the inside of the leg. The knee had gained in one day three-fourths of an inch in girth. So great was the tension and pain, that on the 25th absolute rest was ordered, and leeches were applied. The bleeding continued too long, and seemed to cause unusual feebleness, but on the 26th the inflammation was much lessened. Stimulants were used internally, as she seemed singularly weak, and wet cold was applied locally. A day or two later dry cold was used, and the knee was found to be easy if at rest, but very painful when stirred or even handled.

On May 9th for the first time in trying to move the leg, which by this was much more free of pain, Mrs. B. noticed a want of power to lift the limb, or to change its place from side to side. The extensors, abductors and adductors were enfeebled.

At this time the leg was put on a gutta percha splint, and kept on it two weeks with compression to the knee by sponges and bandages, while locally iodine was used.

On June 1st Dr. J. H. Brinton asked me to visit Mrs. B. in consultation. At this time there was some pain in the lumbar spine—not a very definitely fixed pain—and there were slight twitches in the thigh muscles above mentioned, and also in the peroneal group—this symptom being worse at night and very disturbing to the patient—as they sometimes moved the patella so as to give pain.

On April 24th the knee measured $14\frac{1}{8}$ inches; and during June it continued to be 13 inches. The other measurements will, by and by, be mentioned; they showed at this time remarkable atrophy of the whole limb, but chiefly of the anterior groups of muscles, and there was entire loss of power to lift the leg or even to stir the extensors, or to move the part laterally; yet the joint was vastly better, and indeed quite free from pain, a slight roughness being present when it was bent. The gain took place under use of cod-liver oil, iron, shampooing, and induction currents, which at this time failed to stir the disordered muscles. The temperature of the

limb had fallen ever since the loss of power began, but, with the improvement alluded to, the limb throughout became warmer.

July 1. The foot could be rested on the floor with the knee in half flexion, and July 15th could be voluntarily raised from the floor a little, while extended.

17th. Mrs. B. was carried out of town, and finally spent the summer at the sea-side, continuing her treatment with daily sea-baths.

During July she walked on crutches, and on August 25th was able without crutches to walk a few steps, though not without limping and pain in the knee. Meanwhile the gain as to temperature, power and nutrition continued, and the sensibility, never wholly lost, became decisively better.

Sept. 5. I saw her on her return. She could now walk about one-fourth of a mile on crutches.

The measurements were as follows:—

	Over patella.	8 inches above patella.	8 inches above patella.	4 inches below patella.	8 inches below patella.
June 8, 1870.	13	13	16	10½	10½
Sept. 16, 1870.	13½	14½	17½	11½	11
June 8, 1870.	Ankle, 6½.		Sept. 16, 1870. Ankle, 6½.		

During the autumn the improvement went on, and in November, Mrs. B. could walk a few yards without aid, but both in the winter and through the last summer it was curious to see how all of the symptoms fluctuated almost from day to day.

Early in the winter the other knee began to suffer, and precisely the same set of symptoms were seen in the right knee and leg, save that the loss of sensation was not so considerable. I had now, of course, no longer any remainder of doubt as to the spinal origin of this most interesting case.

With varying fortunes Mrs. B. passed through the winter, the joints becoming worse at times and again better, but every new onset of arthritic trouble being followed or accompanied by increase of atrophy, loss of power and sensation, and the limbs being liable to notable alterations in temperature.

June 1, 1871. Mrs. B. saw Dr. Brown-Sequard, to whom I wrote an account of her case. Under his advice she took iodide of ammonia and strychnia in increasing doses, and with these aids and steady sea-bathing became vastly better, and in the fall could walk a mile without aid. The limbs now showed a new increase in size and firmness, sensation was almost perfect, and the joints

free of pain. The winter brought, as before, some return of trouble, but not to the same extent as in the last winter.

April 1, 1872. Dr. Brown-Sequard met me in consultation, when, except the use daily of ice rubbing for the knees, no change was made.

The summer of 1872 was spent at Cape May, with the usual good effects. In October, Mrs. B. was able to walk about in-doors and out much as other women, all of her untoward symptoms having disappeared. In 1873 she went to Pittsburg to reside, and while there had no further annoyance until January, 1873, when she had a most curious and instructive attack of the old symptoms, accompanied with general feebleness, and the appearance of an eruption of herpes, which, originating on the left shoulder under the left arm, passed over the left chest. The eruption was very painful, and lasted about ten days. I did not see her in this attack, but Dr. Benham, her physician, has been so kind as to give me a full description of this incident of the case. Previous to the attack there had been some causes of weakness. The palsy and knee troubles passed away under use of oil and strychnia, and now, except as to power to kneel or stoop readily, Mrs. B. is perfectly well.

In this remarkable history of joint lesions, atrophic palsy preceded by twitching of the muscles, dysæsthesia, and altered thermal conditions, we have all the needed evidence to show that there was a central cause, and that this was a local myelitis of the spinal cord. Its clinical value lies in the fact that the joint disease distinctly preceded the remaining symptoms.

I have met with other examples of spinal disease producing arthropathies, but in all of them the spinal malady existed for long periods before it gave rise to arthritis. These histories, therefore, will teach us nothing new, and I pass on to the last, and perhaps the most remarkable of my cases. In November of last year, Dr. Bolling, of Chesnut Hill, asked me to see with him a case which had been looked upon as mere rheumatism, but which Dr. Bolling had rightly concluded to be of neural origin.

CASE IV. — The patient, Eliza M., æt. eight years. When six years of age, in May, began to complain of pain in both ankles, and to turn the feet under her in walking; braces were applied, with no relief to the pain, and they were at length removed. The trouble, nevertheless, grew better, to reappear the following spring, with pain both in the ankles and wrists. Then suddenly

the toes swelled at their joints, becoming red, tender, hot, and stiff. Within a few days the ankle-joint also became intensely inflamed, and finally the whole of both feet. Neither the knees nor the hands became inflamed. As the diseased joints grew better, which they did very rapidly during six weeks at the sea-shore, the feet were found to drag in walking, although after a time she became quite well and even active. During each of these attacks, the peroneal and anterior tibial muscles and the interossei of the feet became singularly wasted, and after each onset all of these muscles underwent within a few weeks the most amazingly rapid repair. The hands passed through like changes, but their joints became stiff, and a little rough and enlarged, without any pain, and the interossei, the thenar group, and the extensors exhibited the same speedy wasting, and the same as sudden and remarkable restoration, but in all the attacks this revival left them not quite well nor fully active, so that after each return of disease there was a slight addition to the permanent disability.

As to the latest attack, in November, 1874, I got a better account. The child when seen by me was healthy looking, cheerful, and bright. About November 10th, she began to drag the feet unusually. Then a few days later, she had nausea, and occasionally sick stomach, which endured for a week, whilst meanwhile pain appeared in the leg and in both feet, together with intense pain, heat, redness, and great swelling of all the joints of both feet. The pain was very great, and the tenderness on motion distressing; Dr. Bolling thought that taken alone, no better illustration of acute rheumatism could have been found.

The joints of the hands underwent their usual changes, becoming deformed without pain. When I first saw her in November, the appearances described were lessening in severity, but the atrophies were well marked.

Dec. 10, 1874, Dr. Bolling met the patient at my house, when I made with his aid the following careful notes of her condition. The hands present good types of the "claw hand." The first phalanges are drawn back in extreme extension, the second and third phalanges flexed. The interossei wasted the first most notably. The thumb nails look directly upwards, so as to be on the same plane as those of the fingers, owing to wasting of the whole thenar group of muscles. The palm is flattened. All of the joints are large and stiff. These peculiarities Dr. Bolling tells me nearly altogether disappear between the

attacks. The feet are cold, 85° F., bluish and congested. The joints have already lost almost all traces of disease, and are only a little stiff and swollen. The intrinsic muscles of the feet and the flexors of the feet are wasted, but the extensors of the feet, normal as to size, are slightly contracted in tonic spasm. The toe nails are curiously and deeply indented by numerous transverse furrows, probably marking interruptions of growth.

All the foot extensors are palsied, but there is still feeble power to flex and extend the toes, and extend the feet. The interossei of the hand and the extensors of the wrist are very weak, the common extensor of the fingers weak, the flexors all healthy.

Sensation as to touch, pain, localization, and temperature everywhere normal.

The electrical conditions were interesting. A galvanic current (interrupted and reversed) of 60 cells did not move the flexors of the feet, nor was it capable of moving the gastrocnemius which yet responded to volition. Powerful induced currents also provoked in these parts no reaction. Induced currents moved the third, fourth and fifth interossei of the hands, and best on the right side, but did not stir in either hand the first, second and third interossei, or the thenar group, save only the ulnar adductor, and this feebly. The extensor group in the arms reacted badly under induction currents.

There seemed to be no other muscular loss or defect, and the heart, kidneys, stomach and special senses were normal.

The symptomatology of this case of course allies it with progressive muscular atrophy, from which, however, it is set apart by most obvious clinical peculiarities.

It is said that an elder sister died of the same disease, and I ought to add that both parents are unusually healthy people.

The last case of my series is in many points different from the others, but more especially in the oddity of the hand symptoms. Apart from this portion of the case, it resembles, save in the acuteness of attack, the three others; but in it the loss of power preceded the arthritic symptoms. In the others there was joint disease of painful character, followed by atrophies, loss of power, and change of temperature, while in one only was there also loss of feeling. In all, the changes were rapid, and the cure of the wasting and palsy speedy and complete.

Reports of Societies.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

(Reported by RALPH E. STARKWEATHER, M.D.)

Regular meeting April 26, 1875. The President, Dr. John Bartlett, in the chair.

Dr. Plym. S. Hayes read the following paper :

Experimental Observations on Salicylic Acid. By PLYM. S. HAYES, M.D.

It may not be without interest to review some of the considerations which caused the following experiments to be made.

In the article on Salicylic Acid that Dr. Squibb read before the Medical Society of New York, there occurs the following: "It is said to reach and prevent processes of decomposition which are beyond the reach of all other antiseptics or antiferments." This, in connection with the suggestion of its internal use, and the following from Dalton's Physiology: "The action which is exerted upon the food by the digestive fluids is not that of a simple chemical solution. It is a transformation, by which the ingredients of the food are altered in character at the same time that they undergo the process of liquefaction. The active agent in producing this change is in every instance an organic matter, which enters as an ingredient into the digestive fluid; and which, by coming in contact with the food, exerts upon it a *catalytic action*, and transforms its ingredients into other substances;"—were the means of framing the question, Would the administration of salicylic acid at or near the time of the ingestion of food arrest or retard in any manner the action of the various digestive ferments, such as the saliva, gastric juice, etc., on the ingested food? It might be well, just here, to explain the reason why the word catalysis, as used by Dalton, was replaced by fer-

ment. Catalysis in the older chemistries occupied a place of great importance, and was the pack-horse on whose back was strapped many of the then inexplicable phenomena connected with this science. It is almost entirely and in some cases quite ignored in our more recent text books. Fermentation which has in a measure supplanted catalysis, refers in its most restricted sense only to that action; the cause of which is almost entirely due to living organisms. Dr. Squibb calls this class of ferments "vital." That produced by yeast, and many which occur in putrefaction, are examples of this form of fermentation. That chemical action in which living organisms have no influence; but the metamorphosis is caused by the action of some physical agent, or of some definite chemical compound elaborated by an organism—some organic substance—the same authority calls "chemical," "those which occur independent of vitality, as the production of volatile oil in mustard and bitter almonds, the effects of diastase," etc. As long as chemistry offers no explanation of "chemical" ferments, and scientific men are content to use the term, and professors in our medical colleges place the action of saliva, gastric juice, etc., under the head of ferments, we, too, may use the term without censure.

In order to experimentally answer the question, some of Squibb's unbleached salicylic acid was procured, which he says "is probably pure enough for almost all, if not for all, the purposes to which the acid is at present applied to practical uses." With this I tried two series of experiments. The first series was instituted to determine if salicylic acid had the power of preventing the formation of glucose when saliva had been added to starch which contained a portion of acid.

The second series was to determine whether the acid arrested or retarded in any measure the action of gastric juice—or its active principle, pepsin—on coagulated albumen.

First Series. The first experiment consisted in the ad-

dition of saliva to hydrated starch, with which had been boiled salicylic acid. There was apparently as much sugar present as there would have been had not the acid been employed. Before making the experiment it was observed that the acid had apparently undergone decomposition from some unknown cause. The surface of the starch was covered with iris colored patches, such as are seen when a thin film of oil is spread on the surface of water.

Less sanguine of success in proving that the acid was capable of preventing or modifying the action of saliva on starch, the second experiment was entered upon. This consisted in the addition of salicylic acid to cold hydrated starch. After thoroughly agitating the mixture, saliva was added and the agitation continued for two or three minutes when the test was applied. In this no sugar was discovered.

The third experiment was a repetition of the last one. There was indication of a very minute trace of sugar. This was so slight that even after standing for hours there was hardly a perceptible precipitate. The slight change in color of the mixture was the only indication of sugar.

The fourth experiment was a repetition of the first. In this there appeared to be no decomposition of the acid. The chemical reaction demonstrated that although sugar was present, yet the quantity was not nearly as great as it would have been, provided the acid had been left out.

In the fifth experiment the acid was added to the starch when cold, and the saliva remained in contact with the prepared starch for nearly two hours before the test was applied. The indications of sugar were only slight.

In the sixth experiment a much larger quantity of acid was boiled with the starch than at any previous time. The saliva remained in contact with the starch mixture for two hours. The indications of sugar were only slight. The test used was a modification of Trommer's. The reactions of the above experiments were compared with similar reactions in which the salicylic acid was omitted.

The second series consisted of but the following experiment. Into the following solution: *R.* Wyeth's saccharated pepsinæ porci, gr. ij, acidi muriatici, gtt. ij, aquæ, 3 ij, five grains of the coagulated white of an egg were placed. At the same time, into a similar amount of a like solution half a grain of salicylic acid and five of coagulated albumen were placed. These were placed in separate vials, subjected to the same conditions, and compared from time to time. At the end of forty-eight hours the albumen in the vial which contained the pepsin solution had disappeared, while that which was in the vial containing the acid weighed two and a half grains, thus having lost just one-half of its weight. This albumen was replaced in the same solution, and at the end of ten days had apparently undergone no change.

After completing these experiments my attention was called to two articles in which mention of the internal use of the acid was made.

In connection with the foregoing experiments, quotations from the articles may not be without interest. In an article on salicylic acid, written by Dr. Boyland, in the Medical and Surgical Reporter, occurs the following: "The acid is now given per os, in doses of ten grains, thrice daily, as an antipyretic in pneumonia, with cold baths containing a portion of the same; also in typhoid fever with the same baths." The Boston Medical and Surgical Journal contains the following information: "Professor Kolbe, to prove the innocuousness of salicylic acid, took, for several consecutive days, half a gramme (seven and a half grains) daily, without the slightest observable unpleasant effect. After an interval of eight days he took, for five consecutive days, one gramme (fifteen and a half grains) daily, and then for two days one and a half grammes (twenty-three grains), in alcohol, each day. The digestion was perfectly normal; no traces of salicylic acid could be found in the urine or fæces. (The test is perchloride of iron, which gives an intense violet color.) At no time was there the slightest discomfort."

"The experiment was repeated by Professor Kolbe and eight of his students, all at the same time. Each took on the first day one gramme, and on the second day one and a quarter grammes of salicylic acid. Not one of them was able to observe the slightest derangement of any organs." In neither of the articles is mention made of the time of administration of the acid; whether near the time of the ingestion of food or not.

Taking all into consideration yet from the foregoing experiments we may draw this conclusion, that it would hardly be proper to administer salicylic acid at or near the time of eating. In some cases it might give rise to severe trouble, particularly in those patients whose power of digestion has been enfeebled.

Dr. Squibb states that, "When applied to wounds, it appears immediately in the urine." This he gleans from Thiersch Pharm. Centrahalle.

Professor Kolbe says, when given internally "no trace of salicylic acid could be found in the urine or fæces." If both statements are correct we may look for different effects according as it is administered. If administered by applying it to an abraded surface, it, by passing through the system unchanged, may destroy septic materials already existing in the blood; while such would not be its effect when given by the mouth, if Professor Kolbe's statement is correct, for it would beyond all probability undergo chemical decomposition by the action of the various digestive fluids on it before it could be absorbed.

I added salicylic acid to the fluid of ascites which was rich in albumen and contained blood globules, pus corpuscles and epithelial scales. The acid at once became white, and after standing for several hours there formed on the surface of the fluid a white coagulum, and the whole of the fluid rendered more gelatinous than a sample of the same fluid which was not treated with the acid. The coagulum was removed and washed. It was then dissolved in liquor potassæ and coagulated by the addition of nitric acid, and again dissolved by the potassa.

The fluid up to the time of treating it with potassa was alkaline.

A portion of acid was added to the albumen of an egg mixed with water. A change was at once observed to take place—the acid becoming white—and in the course of a few hours the whole was pervaded by the coagulum.

From these experiments we may conclude, first: that salicylic acid retards digestion in a marked degree when performed artificially; and second, that it slowly coagulates albumen.

CANCER OF THE STOMACH.

Dr. Etheridge gave the clinical history and treatment of this case, and was assisted by Dr. I. N. Danforth who had made the post mortem examination, and displayed by means of the microscope, to the Society, numerous pathological specimens taken from this case.

The paper has been reserved for publication.

The discussion which ensued called forth, among other facts, the noticeable one that the patient with other members of her family had, thirty years previously, partaken of a broiled chicken which had been kept in a new refrigerator. On the day next following the meal, the entire family was prostrated by acute arsenical poisoning.

From that time forwards the patient had been subject in summer to bilious colic, and had been obliged to refrain from certain articles of food.

Dr. Danforth thought that there had at first been simple inflammation of the pyloric opening of the stomach, and that the tissues inflamed at this point had later in life become invaded by true cancer cells. Epithelial cells, provoked from their regular growth, may become atypical, and so, after years of constant irritation, become malignant; or, epigrammatically, *the lawlessness of growth is the essence of malignancy*, speaking histologically.

QUINIA AND ITS ALKALOIDS.

Mr. Albert E. Ebert, lately the President of the American Pharmaceutical Association, addressed the Society briefly as follows :

There are a number of alkaloids in the Peruvian bark, quinia being the best known and most largely employed. There are besides : 1, quinidia ; 2, cinchonidia ; and 3, cinchonina. The cinchonina in the red bark is nearly as abundant as quinia.

There has been an immense amount of these "cheaper" alkaloids made while manufacturing quinia, and, there having been no demand for these other alkaloids, they have been stored away, and their cost has been added to that of quinine.

The cheaper alkaloids are said by reputable members of the medical profession to possess the same or nearly the same therapeutical effect as quinine.

The manufacturers have made efforts to introduce these bi-products (the cheaper alkaloids) to the profession and rid their stock of these alkaloids that have accumulated for years while making quinia.

Sweet quinine was then spoken of, and the history of the exposure of the fraud and expulsion of certain parties from the American Pharmaceutical Association.

Cincho-quinine was next referred to.

If the testimonials from physicians in regard to this nostrum are true, then cinchonina sulphate has a large medicinal virtue, for none can be attributed to the quinia it is said to contain.

Mr. Wentzel, of California, a competent and conscientious chemist, has examined this nostrum and found that it contained cinchonina only.

In 1873, Mr. Ebert had himself examined seven different and original samples, microscopically and chemically, and did not find a trace of quinia in them.

In the wholesale market not one of the original packages made before 1874 can be had ; they have either been used or bought up.

The samples now sold do not contain the alkaloid quinia but the sulphate salt of quinia, and this only in the *six-tenths* of one per cent.

The success of these alkaloids goes to show that in many respects they are as useful in therapeutics as the quinia sulphate, and as they cost only twenty cents per ounce, are much cheaper.

If extensively used, the price of quinine would be reduced, and the rapid destruction from the forests of these precious trees, would be much lessened.

QUININE BRUTE.

In reply to a question, Mr. Ebert said that the article generally dispensed under the term quinine brute, is chinoidine, or the precipitated extract of cinchona bark, such as is found in the market under the name of "Wetherill's," or "Ellis'" extract of calisaya bark.

The process is published in Parrish's Practical Pharmacy, fourth edition, p. 665.

Trousseau, in his work on Therapeutics, says that quinine brute is a combination of all the cinchona alkaloids in the impure state.

Chinoidine is the residue after the crystallizable principles have been extracted from the mother liquid, evaporated down to a solid extractive consistency. This preparation has the same relation to the crystallizable alkaloids, that molasses has to sugar.

Dr. Etheridge had found that children and others could take quinine agreeably if given in the syrup glycyrrhizæ.

In one instance, a gentleman with intermittent fever, unable to take quinia, was effectually relieved by twenty grain doses of quinine brute.

Dr. Starkweather referred to an article on intermittent fever, by Bouchut, which considered that quinine brute was the most useful remedy to prescribe for children; it is less soluble and bitter, and more easily taken by children. It should be exhibited just after the fever, in the dose of three to six grains daily; this is nearly

double the dose of quinine recommended by Bouchut to be given to children, and he adds, that this should be given by enema.

The Society, after transacting considerable and important routine business, adjourned.

Selections.

ON THE SIMILARITY BETWEEN THE RED BLOOD-CORPUSCLES OF MAN AND THOSE OF CERTAIN OTHER MAMMALS, ESPECIALLY THE DOG ;

CONSIDERED IN CONNECTION WITH THE DIAGNOSIS OF BLOOD-STAINS IN CRIMINAL CASES.

By J. J. WOODWARD, M.D., U. S. ARMY.

In his recent paper "*On the Value of High Powers in the Diagnosis of Blood-stains*,"* Dr. Joseph G. Richardson, of Philadelphia, affirms the possibility of distinguishing the blood of man from that of the pig, ox, red-deer, cat, horse, sheep, and goat, by the measurement of the red blood-corpuscles, even in dried stains, such as the microscopist is called upon to examine in criminal cases.

The circumstance that Dr. Richardson does not mention any animal whose blood-corpuscles cannot be thus distinguished from those of man, and the warmth with which he combats the prudent counsel which Virchow,†

* American Journal of the Medical Sciences, July, 1874, p. 102 ; also the Monthly Microscopical Journal, September, 1874, p. 180. This paper has attracted considerable attention. See, for example, the Lancet, August, 1874, p. 210 ; the Medical Times and Gazette, August 8, 1874, p. 151 ; and the London Medical Record, September 9, 1874, p. 560. The last of these Journals is the only one to raise a warning voice : "Dr. Richardson's paper is interesting, but we are afraid the question often put, 'What is the source of the blood in a stain ?' must go unanswered. In questions where capital punishment hangs on scientific evidence, that evidence must be of no doubtful or questionable nature."

† Rud. Virchow—Ueber die forensische Untersuchung von trockenen Blutflecken—Virchow's Archiv., Bd. xii, (1857), S. 334.

Casper,* and Taylor,† in common with other experts,‡ have offered to enthusiastic microscopists in connection with this subject, led me, on perusing his paper, to fear he would be understood as teaching, in a general way, that it can be determined by the microscope with certainty whether a given stain is composed of human blood or not; and this fear has been justified by some of the notices of his essay which have since appeared in the medical journals.

Now this subject is one which, from time to time, becomes of great importance in criminal cases; and justice, no less than scientific accuracy, demands that the microscopist, when employed as an expert, shall not pretend to a certainty which he does not possess. I suppose no experienced microscopist, who has thoroughly investigated this subject, will be misled by Dr. Richardson's paper, but there are many physicians who possess microscopes, and work with them more or less, to whom a partial statement of facts on such a subject as this is peculiarly dangerous, and the object of the present paper is to point out to this class of readers that Dr. Richardson's statement of the case, even if all he claims be granted as true, is, after all, not the whole truth; that there are certain mammals, among them the dog, the

* J. L. Casper—Handbook of forensic Medicine—translation of New Sydenham Society, London, 1861-5, vol i, p. 138, *et seq.*; also p. 198, *et seq.* See also the new and enlarged German edition of the same by Dr. Carl Liman—Practisches Handbuch der Gerichtlichen Medicin—5 Aufl. Berlin, 1871, Bd. II, S. 173, *et seq.*

† A. S. Taylor—The Principles and Practice of Medical Jurisprudence—2d edit. London, 1873, vol. i, p. 548.

‡ Among others, I may mention E. Brucke—Ueber die gerichtsarztliche Untersuchung von Blutflecken—Wiener Med. Wochenschrift, Jahrgang, 1857, S. 425. Hermann Friedberg—Histologie des Blutes mit besonderer Rücksicht auf die forensische Diagnostik—Berlin, 1852. Andrew Fleming—Blood-Stains—*American Journal of the Medical Sciences*, vol. xxxvii, N. S. (1859), p. 84. Wharton and Stille—Medical Jurisprudence—3d ed., Philadelphia, 1873, vol. ii, p. 696. M. Z. Roussin—Examen Medico-legal des Taches de Sang—*Annales d'Hygiène*, tome xxiii, (1865), p. 139. For an elaborate history of the growth of our knowledge on the subject up to 1860, the reader may consult B. Ritter—Zur Geschichte der Gerichtsarztlichen Ausmittelung der Blutflecken, in Henke's *Zeitschrift für die Staatsarzneikunde*, 1860. Drittes Vierteljahrheft, § 31. The chief authority in favor of the possibility of distinguishing the blood-corpuscles of man from those of other mammalia, is Carl Schmidt—Die Diagnostik Verdachtiger Flecke—Mitau u. Leipzig, 1848. I have not yet obtained a copy of this paper, but find abstracts of it in Schmidt's *Jarbuch* for 1849, p. 258, and Ritter's History, just cited. The reader will also find liberal extracts in Fleming's paper, cited above. The extravagant views of Schmidt are especially confuted by Brucke and Virchow in the papers cited above.

constant companion of man, whose red blood-corpuscles are so nearly identical in size with those of human blood, that they cannot be distinguished with any power of the microscope, even in fresh blood, much less in dried stains; and that, consequently, it is never in the power of the microscopist to affirm truthfully, on the strength of microscopical investigation, that a given stain is positively composed of human blood, and could not have been derived from the blood of any animal but man.

I must do Dr. Richardson the justice to state, at the outset, that these facts are well known to him, although, from motives of prudence, he has thought proper to be silent with regard to them. In a note dated October 19, 1874, in reply to one in which I informed him of my intention to write the present paper, he says: "I should be very much obliged to you if you would add to your remarks (in a foot-note or otherwise), that, in communicating with me, you found me fully aware of the difficulty of making anything more than a differential diagnosis, even in the cases I specified, and of the impossibility of distinguishing the blood of man from that of a monkey or dog, but that I had refrained from giving prominence to these facts," lest an improper use should be made of them in the defense of criminals.

I must, however, entirely dissent from this view of the matter. I cannot forget, that, on more than one occasion in the past, witnesses summoned as scientific experts have been so misguided as to go into courts of justice, and swear positively, on the strength of microscopical examination, that particular stains were human blood;* and I think the danger that others may do so in the future, to the prejudice of innocent men, is more to be feared than the possibility that an acquaintance with the true limits of our knowledge on this subject may sometimes be made use of in the unscrupulous defense of real criminals. I have, therefore, no hesitation whatever as to my duty, in speaking of this subject at all, to speak the whole truth, so far as it is known to me; and in so

* Passing by certain American cases, I may refer, in illustration of this statement, to the celebrated English case, *Reg. v. Thomas Nation* (Taunton Spring Assizes, 1857, p. 279), with regard to which the editor of the *London Medical Journal* has pithily said, that the testimony of the expert must be looked upon "as most disingenuous clap-trap, and rather what we might expect to hear at some popular lecture, where the 'wonders of the microscope' form the theme of declamation to a gaping audience, than the solemn asseveration on oath of a man of science in a court of justice."—*Med. Times and Gaz.*, April, 1857, p. 366.

doing I am happy to say I follow the practice of many of the best writers on medical jurisprudence.

In the instance of the dog, it might at first sight be supposed, from the estimates of the average diameters of the red corpuscles in this animal and in man, as given by Gulliver and Welcker, the authorities most frequently cited in the modern text-books, that a certain small, but constant and measurable difference existed, which might serve as the basis of a distinction in legal cases. This inference, however, is not only contrary to the facts of the case, but an examination of the original essays of the authors cited shows that it is not borne out by their observations.

The mean diameter of the red corpuscles of man, according to Gulliver,* is 1-3200th of an inch ($=.00794$ millimetres), while that of the red corpuscles of the dog is 1-3542d of an inch ($=.00716$ mm.). With regard to his estimate for the human corpuscle, Mr. Gulliver† says: "We are only speaking now of the average size; for they vary like other organisms; so that in a single drop of the same blood you may find corpuscles either a third larger or a third smaller than the mean size, and even still greater extremes." According to this statement, the human red blood-corpuscles may vary in a single drop of blood from 1-4800th of an inch ($=.00529$ mm.) to 1-2400th ($=.01058$ mm.). Mr. Gulliver tells us further, in the same paragraph: "My own estimate of the average size has been deduced from numberless measurements, frequently repeated during the course of several years, of corpuscles quite fresh and swimming in the blood, and in various artificial mixtures, as well as in the dry state." I have not, however, been able to find, in those of his papers which I have examined, any of the numerical data from which this average size was deduced.

* George Gulliver, F.R.S.—Lectures on the Blood of Vertebrata—*Med. Times and Gaz.*, vol. ii, of 1862, p. 101, *et seq.*—On the Red Corpuscles of the Blood of Vertebrata, etc., *Proceedings of the Zoological Society of London*, 1862, p. 91.—The Sydenham Society edition of the works of William Hewson, London, 1846, p. 216, *et s. q.*—Appendix to Gerber's Elements of the General and Minute Anatomy of Man and the Mammalia, London, 1842, p. 31, *et seq.*—Observations on the Blood-Corpuscles or Red Disks of the Mammiferous Animals, *London and Edinburgh Philosophical Magazine*, vol. xvi, (1840), pp. 23, 105 and 195; also vol. xvii, pp. 139 and 325; also vol. xxi, (1842), p. 107. For a list of other papers referring to the blood-corpuscles of various animals, see the Works of William Hewson above cited, note to page 236.

† *Med. Times and Gaz.*, vol. ii, of 1842, p. 157.

In the table of measurements appended to Gerber's Elements, in which for the first time he gave "mean or average sizes" (in previous papers he had only recorded "common sizes," occasionally supplementing these by the extremes observed), Mr. Gulliver explained his method of arriving at the average size as follows: "The common sized corpuscles are first set down, then those of small and large size, and lastly, the average deduced from a computation of the whole."* In this table the measurements for the common dog are given as follows:—†

Common sizes,	{ 1-4000 of an inch.
	{ 1-3500 " "
	{ 1-3200 " "
Small size,	1-4570 " "
Large size,	1-2900 " "
Average,	1-3542 " "

Where the "average" is simply the arithmetical mean of the several fractions given above, it can hardly, I think, be accepted as the true average size, since as much weight is given in this mode of calculating to the rarer as to the more frequent forms. Accordingly it is not surprising that we find in a former paper† measurements which do not accord very closely with this average: "Domestic dog, old mongrel, common diameter of corpuscles 1-4000th to 1-3200th of an inch." "Fox hound puppy, one day old, a bitch, 1-3000th, and 1-2666th, the most common diameter of the corpuscles." "Fox hound puppy, twelve days old, a bitch: most common diameter of the corpuscles 1-3000th and 1-2885th of an inch. Extreme sizes 1-4000th and 1-2666th." "Mongrel puppy, four months old, a bitch, all the following diameters common, viz.: 1-3693d, 1-3554th, 1-3429th, and 1-3200th." The measurements for the second and third of these animals are about as much larger than those for the human species as the others are smaller.

It is interesting to know just how Mr. Gulliver's measurements were made. He tells us he used a glass eyepiece micrometer so adjusted that the divisions had a value of 1-4000th of an inch each. "If one space and a quarter of this micrometer were occupied by a single globule, this would of course measure 1-3200 of an inch ;

* Appendix to Gerber's Elements, cited above, p. 1.

† Loc. cit., p. 38.

‡ London and Edinburgh Philosophical Magazine, vol. xvi. (1840), p. 28.

if three equally-sized particles lying in a line, and touching at their edges, covered three spaces and a half, the diameter of each of these would be 1-3429th, if four spaces 1-3000th of an inch.”* The objectives used were an eighth by Ross, and a tenth by Powell.† It is not stated whether these objectives were provided with the screw-collar adjustment for thickness of cover, but they probably were; and if so, doubtless all the measurements were somewhat vitiated, like others of the same date, by failure to allow for the variation in magnifying power produced by turning the screw-collar. Moreover, it must be clear, that practically the fractions of a division of the eye-piece micrometer were only *estimated*, for the case in which a number of “equally-sized” corpuscles would be found “lying in a line,” and just “touching at their edges,” without overlapping, must have been rare. As to the accuracy of the value assigned to the eye-piece micrometer, Mr. Gulliver himself says: “In the absolute accuracy of any micrometer applied to objects so extremely minute, it is difficult to place implicit confidence;” and he only claims “relative exactness” for his results.‡

Turning now to the original essay of Welcker, we find that his observations give even less support than those of Gulliver to the notion that the blood of the dog can be distinguished from that of man by the microscope. Welcker’s measurements, as ordinarily quoted in the text-books, are .00774 of a millimetre for man, and .0073 for the dog. I find, in his original paper,§ that the mean for the dog was derived from the measurement of but ten corpuscles in the blood of a single terrier; the variations in this case being, minimum, .0065 mm., maximum, .0082 mm. Now, if we turn to the table|| of his own measurements of human blood, we find, that, in the last measurement of the blood of Dr. Schweigger-Seidel, fifty corpuscles gave the following results: mean, .00724 mm., minimum, .0051, maximum, .0085, in which case the mean is a trifle less than that found for the dog.

I would commend this table of Welcker to the study of those who may be disposed to underrate the diversity of size which may be observed among the human red

* Loc. cit., p. 24. † Loc. cit., p. 24 and p. 105. ‡ Loc. cit., p. 24.

§ H. Welcker—Grosse, Zahl, Volum, Oberfläche und Farbe der Blutkörperchen, bei Menschen und bei Thieren. Zeitschrift für Rationelle Medicin, 8te R., Bd. xx, (1868), S. 257.

|| Loc. cit., p. 263.

corpuscles; the minimum measurement recorded in it is .0045 mm., the maximum .0097 mm.; the author remarks: "I have always, both in animals and in man, found the transverse diameter of the blood-corpuscles of one and the same individual vary from one-fourth to one-half of the mean measurement; and it appears that all the sizes lying between the two extremes are present in tolerably equal numbers, with the exception of the smallest corpuscles, which occur for the most part singly and at intervals."

I may mention, further, that the mean dimensions of the human red corpuscles so often quoted from Welcker, viz., .00774 mm., with a minimum of .0064 mm., and a maximum of .0086, were not derived from the whole of this table, but from four sets of measurements of his own blood only, of which two were dry preparations and two from the moist blood. He tells us that he selected the mean .00774 mm. because it *was* derived from his own blood, which he had used in a previous research on the number of the blood-corpuscles, and thought best, therefore, to use also in the computation of their volume, which is one of the chief subjects discussed in his paper. The mean of eight other measurements from five different individuals was .00768 mm. The blood of a chlorotic woman gave .00656 mm., as the mean of the corpuscles examined moist, and .00693 mm., as their mean when examined dry.

Welcker made his measurements with Kellner's System III, Ocular II, magnifying about 620 diameters, and by a delicately ruled eye-piece micrometer, each division of which, with the power used, had a value of .001723 mm., as determined by the stage micrometer: "A human blood-corpuscle fell within four or five of these divisions, while, on account of the great delicacy of the ruling, fifths or even tenths of a division could be estimated with tolerable exactness." The stage micrometer was a millimetre in one hundred parts, ruled by Lerebours, and which Welcker had verified by comparison with a standard scale in a manner which he describes in full, and which is worthy of study. He measured, as a rule, fifty blood-corpuscles from each sample, and these were not selected, but taken indiscriminately one after the other as they came under the scale while the specimen was being moved along.

Other observers besides Gulliver and Welcker have recorded minute differences in the average size of the red

corpuscles of man and the dog. Thus Carl Schmidt* estimates the average diameter for man at .0077 mm., for the dog at .0070 mm. A. Kolliker† fixes the mean for man at .0033 of a Paris line (= .00751 mm.)—that for the dog at .0031 of a Paris line (= .00709 mm). On the other hand, Friedberg‡ makes the blood-corpuscles of the dog the largest, stating that he finds the human corpuscles measure from .0058 to .0070 mm.—those of the dog from .0054 to .0080.

For myself, after repeated measurements of the blood of the dog, and of human blood. I can only say that I find no constant difference between them, whether the fresh blood or thin layers dried on glass be selected for measurement. The mean of fifty corpuscles taken at hazard is seldom twice the same, and sometimes that of human blood, sometimes that of dog's blood, is a trifle the largest.

The following measurements, intended to illustrate these facts, were made with a glass eye-piece micrometer ruled in two-hundred-and-fiftieths of an inch, and with such a magnifying power that each division corresponded to 1-50,000th part of an inch (.0005079 + mm.). The objectives used were an immersion 1-16th of Powell and Lealand, and an immersion No. 13 of Hartnack, either of which permitted the above value to be given to the divisions of the eye-piece micrometer by properly adjusting the draw-tube. The stage micrometer used in effecting this adjustment is an excellent one in 1-100ths and 1-1000ths of an English inch, in which the several hundredths and thousandths, as nearly as I can measure, are equal to each other, and the ten divisions of the latter value to any one division of the former—a quality in which the stage micrometers in the market are generally deficient. I have compared this micrometer with a standard scale ruled on silver—a centimetre in millimetres and tenths—the property of the United States Coast Survey, kindly loaned for this purpose by Mr. J. E. Hilgard, who assures me that it is "very accurate." I made several comparisons, both by means of an eye-piece micrometer and by the contact method described by Welcker. These comparisons showed that the divisions of my stage micrometer were nearly two per cent. (exactly 1.945 per cent.) larger than they ought to be, and this correction

* Op. cit.

† A Manual of Human Microscopic Anatomy. London, 1860, pp. 519 and 525.

‡ Op. cit.

was accordingly applied in adjusting the value of the eye-piece micrometer. The value assigned to the divisions of the eye-piece micrometer for these measurements cannot therefore, I think, differ from their absolute value by a quantity large enough to modify the results appreciably.

As the divisions represent a value twelve and a-half times less than that of the divisions of Mr. Gulliver's eye-piece micrometer, and more than three times less than those of Welcker's eye-piece micrometer, I did not find it necessary to estimate fractions of a division, as they did, but read the nearest number of whole divisions corresponding to each corpuscle. Fifty corpuscles, or about that number, were measured in each sample of blood. An assistant noted the number of eye-piece divisions corresponding to each corpuscle, as the measurements were made, and the mean was obtained in each case by adding together all the values and dividing by the number of corpuscles measured. Of course, the number of eye-piece divisions found only required to be multiplied by two to convert it into decimals of an inch. I endeavored at first to make these measurements with a dry Powell and Lealand's 1-50th of an inch, with the draw-tube so adjusted that each division of the eye-piece micrometer should equal one-hundred-thousandth of an inch, but I found the outline of the corpuscles, with this power, was not sharp enough to permit me to measure them as exactly as I wished, and I therefore gave the preference to the immersion objectives above mentioned.

Of course, in arranging for these measurements the effect of the screw-collar adjustment of the objective on the magnifying power had to be taken into account. This was done in the following manner: Some thin glass covers, not varying more than a thousandth of an inch from .012 of an inch in thickness, were selected from a lot of so-called 1-200ths of an inch covers by means of a suitable lever of contact.* Some blood being placed under one of these covers, the best adjustment of the screw collar for definition was found by trial. The stage micrometer, which is an uncovered one, was then temporarily covered with another of the selected thin glasses, and, being duly focussed upon, the desired value

* The instrument used was made by Stackpole & Bro., of New York, after the pattern of the instrument designed by Mr. Ross, which is figured in Carpenter on the Microscope, 4th ed., London, 1868, p. 203.

was given to the divisions of the eye-piece micrometer by the adjustment of the draw-tube, after which the measurements were proceeded with, and the screw-collar was not turned again until they were completed.

The following tables present the several means deduced from these measurements, in decimals of an inch, to which, for convenience, I have added the equivalent values in decimals of a millimetre. The number of corpuscles from which each mean was deduced is also given. The measurements made with the Hartnack No. 13 immersion are marked (H.), the others were made with Powell and Lealand's immersion 1-16th.

Measurements of Human Red Blood-Corpuscles, from Five Individuals.

	Number of corpuscles measured.	MEAN DIAMETER.	
		Decimals of an English inch.	Decimals of a millimetre.
1. Dr. W., dry . . .	50	.000304	.00772
2. " " moist . . .	49	.000292	.00742
3. " " " (H.) . . .	50	.000300	.00763
4. " " " (H.) . . .	50	.000289	.00734
5. " McC., dry . . .	50	.000288	.00731
6. " " " . . .	50	.000294	.00747
7. " " moist . . .	50	.000301	.00765
8. Mr. W., dry . . .	50	.000298	.00757
9. " " " (H.) . . .	52	.000297	.00754
10. " T., " . . .	50	.000290	.00737
11. " " " (H.) . . .	50	.000292	.00742
12. " B., " . . .	50	.000296	.00752
13. " " " (H.) . . .	50	.000297	.00754

In each of these measurements of human blood, the great majority of the corpuscles ranged from twelve to seventeen divisions of the eye-piece micrometer—that is, from .00024 to .00034 of an inch. Out of the whole number measured, six were as small as ten divisions, and one as large as eighteen divisions; large and small forms were not searched for, however. The size most frequently measured was fifteen divisions, or .00030 of an inch.

Measurements of the Red Corpuscles of the Dog, from Five Individuals.

	Number of corpuscles measured.	MEAN DIAMETER.	
		Decimals of an English inch.	Decimals of a millimetre.
1. Mongrel terrier, dry . . .	50	.000292	.00742
2. Same animal, " . . .	54	.000299	.00759
3. Another mongrel terrier, dry (H.)	50	.000290	.00737
4. Same animal, moist (H.) . . .	50	.000288	.00731
5. Scotch terrier, " (H.) . . .	50	.000291	.00739
6. Same animal, " (H.) . . .	50	.000289	.00734
7. " " " (H.) . . .	49	.000287	.00729
8. Spitz dog, dry (H.) . . .	52	.000285	.00724
9. Black and tan, moist (H.) . . .	50	.000290	.00737

In each of these measurements of dog's blood, precisely as in the case of those of human blood, the great majority of the corpuscles measured from twelve to seventeen divisions of the eye-piece micrometer (.00024 to .00034 of an inch). Out of the whole number measured, four were as small as ten divisions, but none larger than seventeen were encountered. As with the human blood, however, large and small forms were not searched for, but all the perfectly formed corpuscles brought into view by the movement of the stage were measured as they passed under the micrometer, without selection, until the required number was recorded. The size most frequently measured was fifteen divisions, or .00030 of an inch, precisely as in the case of human blood.

It will be observed that three of the above means for human blood, Nos. 1, 3 and 7, are a trifle larger than any of those of dog's blood, and two of the latter, Nos. 7 and 8, are a trifle smaller than any of those for human blood. All the other means for the dog are within the range of the values found for human blood, and the majority of them are each identical, even to the last decimal place, with some one of those found for man.

I may, moreover, remind the reader in this place, that the variations between the mean diameter assigned to human blood by different observers are quite as great as the variations recorded by any of them between the blood of man and the dog, or even greater. Passing by the older measurements, some of which, as a matter of curiosity, I have given in the foot-note,* I may cite, besides the measurements of Gulliver, .00794 mm., Welcker, .00744 mm., and Kolliker .00751 mm., which have been already quoted in this paper, the following values: Robin,† .0073

* A list of the more important of these older measurements will be found in the *Mensiones Micrometricæ* of R. Wagner (*Partium elementarium organorum quas sunt in homine atque animalibus mensiones micrometricæ*. Erlangen, 1834). Most of these are included in the more complete list given by Louis Mandl (*Memoire sur les parties Microscopiques du Sang*, Paris, 1838, p. 10), from which I take the following, reducing the values which both Mandl and Wagner give in vulgar fractions of a Paris line to decimals of a millimetre. Leeuwenhoek (1673), .00902; *ib.* (1720), .01327; Jurin (1717), .00789; Tabor (1724), .00723; Senac (1749), .00820; Muys (1751), .01128; Weiss (1760), .01085; Della Torre (1763), .00301; Blumenbach (1789), .00789; Villar (1804), .00564; Sprengel (1810), .00902; Kater (1819), .00677; Bauer and Home (1818), .01504; Young (1819), .00451; Rudolphi (1821), .00902; Prevost and Dumas (1821), .00705; Edwards (1826), .00814; Hodgkin (1827), .00902; Wollaston (1827), .00525; Weber (1830), .00525; Muller (1834), .00525 to .00902; Schultz (1836), .00667 to .00836; Wagner (1838), .00645 to .00752—Mandl, himself, gives .00800.

† Charles Robin. Note sur quelques points de l'anatomie et de la physiologie des globules rouge du sang. Journal de la physiologie, tom. i, (1858), p. 283.

mm., Harting, .0074 mm., Valentin,* .0071 mm., and Austin Flint, Jr.,† .00726 mm. (1-3500th inch).

I have thus shown that we are not justified, either by the facts of the case, or by the authorities supposed to favor the possibility of doing so, in attempting to distinguish between the blood of man and that of the dog, by the measurement of their red corpuscles. Mr. Gulliver himself, indeed, appears to have come to a similar conclusion, not only with regard to the dog, but several other animals, for he tells us that the corpuscles of the quadrumana "differ but little from that of man, being only just appreciably, or sometimes not at all, smaller, both in the monkeys of the old and new continents," and that "in the seals, otters, and dogs, the corpuscles are about as large as in man."‡

I myself have not made systematic measurements of the blood of any of these other animals, and am, therefore, unable to speak as authoritatively with regard to them as I can about the dog. From Mr. Gulliver's detailed measurements, appended to Gerber's Elements, however, I am led to believe that there are several other animals whose blood, even in the fresh state, could not be distinguished by the dimensions of the red corpuscles from that of man. Among the domestic animals I may especially mention the rabbit and the Guinea-pig as belonging to this category. To these, besides most of the monkeys of both the old and new world, the seals, and the otters, we may add the kangaroo, the capybara, the wombat, and the porpoise. In the case of all these animals we not merely find that the "average size" calculated in Mr. Gulliver's peculiar way approximates dangerously to the average assigned to man, but the classic 1-3200th of an inch figures among the "common sizes" recorded by Mr. Gulliver for each.

The foregoing remarks and measurements refer especially to the fresh blood of the animals mentioned, and to thin layers quickly dried on glass, as is generally practiced in making preparations of blood for permanent preservation. In such preparations the corpuscles have almost exactly the size they possess in the perfectly fresh blood. The great majority of Mr. Gulliver's measurements were made upon blood prepared by this method,

* I cite the estimates of Harting and Valentin from Welcker's paper cited above, p. 258.

† The Physiology of Man, vol. i, New York (1866), p. 111.

‡ Proc. of the Zoolog. Soc., 1862, p. 96.

and at the time he appears to have regarded the results as the equivalent of measurements made on perfectly fresh blood. "In some instances," he tells us, "there was certainly a slight enlargement in the dried corpuscles, as compared with those seen in their own serum immediately after they were taken from the animal. In the greater number of trials, however, the sizes of the wet and dry discs corresponded accurately."* Twenty years later he seems to have modified this opinion somewhat, for he states, that, when the corpuscles of man and other mammalia were dried on glass, however quickly, they were usually just appreciably larger than in the "liquor sanguinis."† Welcker also found that the mean dimension obtained by measuring the corpuscles dried in a thin layer was apt to be rather greater than that obtained from the measurement of moist blood, and explained it by stating that "the very smallest more spherical corpuscles spread out a little in drying." He regards the difference, however, as so trifling that he uses measurements of dried specimens indiscriminately with those of moist in obtaining his averages. I myself am not satisfied that there is any constant difference, and find, on comparing the mean diameter of fifty corpuscles dry with fifty moist from the same individual, that sometimes the one, sometimes the other, is a trifle the largest. The dried corpuscles are very apt to be deformed, and often many of them are quite oval. If the long diameters of a number of such corpuscles are measured, the mean will be of course too great. I do not find it so if the measurement is confined, as it should be, to those corpuscles which have dried symmetrically and are quite circular.

How is it now with regard to blood dried *en masse*, when sprinkled upon weapons, clothing, wood, etc. Dr. Richardson admits in this case that a *slight* contraction takes place, but evidently regards it as too trifling to interfere with the diagnosis. Carl Schmidt, on the other hand, found that the blood-corpuscles under such circumstances contracted to nearly one-half their original size, and gives .0040 mm. as the mean diameter of the corpuscles of human blood thus prepared, while he assigns .0077 mm. as the mean of human corpuscles dried in thin layers

* Lond. and Edin. Philosophical Mag., vol. xvi, (1840), p. 25.

† Med. Times and Gazette, Aug., 1862, p. 158.

on glass.* It is not necessary for the purposes of the present paper to go into a detailed discussion of this question, for no one will pretend that it can be any easier to make the diagnosis of such stains than it is in the case of moist blood or of thin films dried on glass; and, if it is impossible in the latter case to ascertain by the microscope that the sample submitted is human blood, it would be absurd to hope to do better in the former. I cannot, however, refrain from expressing my conviction that Carl Schmidt was quite as accurate in measuring his samples as Dr. Richardson in measuring his, and that the latter has underrated the variations in size which the dried corpuscles may present under various conditions.

I may also call attention in this connection to the effect of water on the diameter of the corpuscles. Mr. Gulliver has pointed out, that, if "water be mixed with blood, the discs immediately become much enlarged and spherical, quickly losing their coloring matter; and yet, if the whole of this be thus removed, after a while the outlines of the discs, very faint indeed, may frequently be recognized, diminished considerably in diameter and apparently quite flat."† In another place he relates, that "some human corpuscles having an average diameter of 1-3429th of an inch, measured only 1-4800th of an inch after the whole of their coloring matter had been separated in this manner."‡ Suppose, now, the case of blood mixed with water and afterwards dried, as, for example, in the case of an unsuccessful attempt to wash away the blood while fresh?

In conclusion, then, if the microscopist, summoned as a scientific expert to examine a suspected blood stain, should succeed in soaking out the corpuscles in such a way as to enable him to recognize them to be circular discs, and to measure them, and should he then find their diameter comes within the limits possible for human blood, his duty, in the present state of our knowledge, is clear. He must, of course, in his evidence, present the facts as actually observed, but it is not justifiable for him to stop here. He has no right to conclude his testimony without making it clearly understood, by both judge and jury, that blood from the dog and several other animals would give stains possessing the same properties, and that neither by the microscope, nor by any other

* I quote from Fleming, *op. cit.*, p. 111.

† *Lond. and Edin. Phil. Mag.*, vol. xvi, (1840), p. 106.

‡ *Ib.*, vol. xxi, (1842), p. 108.

means yet known to science, can the expert determine that a given stain is composed of human blood, and could not have been derived from any other source. This course is imperatively demanded of him by common honesty, without which scientific experts may become more dangerous to society than the very criminals they are called upon to convict.—*Am. Jour. Med. Sci.*, Jan., 1875.

EXPLANATORY NOTE IN REGARD TO THE DIAGNOSIS OF BLOOD STAINS.

By JOS. G. RICHARDSON, M.D.,

Microscopist to the Pennsylvania Hospital.

In an article by Dr. J. J. Woodward, in the last issue of this Journal, elicited by my paper on Blood Stains, published in the No. for July, 1874, it is stated that we can never "affirm truthfully on the strength of microscopical investigation that a given stain is positively composed of human blood." With this statement I fully agree, maintaining, however, that, whilst it is literally true, it is not the whole truth, because it often happens in practice, that *evidence other than microscopical*, narrows down the conditions of a case to the question: Is this stain human blood or that of an ox, pig, or sheep? The microscopist can then, in such cases, from fair specimens of blood spots, as ordinarily produced, affirm truthfully that "a given stain is positively composed of human blood," should it really be so, and this if doubted I can conclusively prove.

In respect to the *just* prominence which should be given to the circumstance that "the blood corpuscles of a few mammals approach so nearly in size to those of man as to render their distinction doubtful," a fact which I thus mention in my essay in this Journal for July, 1869, of which the paper of July, 1874, is a continuation (see also *Handbook of Med. Micros.*, p. 288), I think Dr. Woodward undervalues, in the first place, the prudence of our many medical brethren who possess microscopes without considering themselves experts; and, second, that he has overlooked in the calculation (which we both, perhaps equally, sought to make, of how to secure for humanity, by our researches, the greatest benefit with the least injury)

one important factor, viz., the shrewd-witted lawyer, to be found in every country town, who would infallibly see that not one syllable of the carefully worded statements in my paper supported any unqualified microscopist's claim to distinguish human from dog's or monkey's blood. Hence, trusting to this powerful element for the protection of the two or three innocent persons who might otherwise be endangered, I felt (honestly if mistakenly), whilst writing both my first paper and its continuation, that, should I more than indicate the animals which render our conclusions doubtful, my work might be utterly condemned as prejudicial to the interests of society, and myself perhaps compared (should I emphasize and reiterate the fact that science alone could not detect the falsehood of a criminal's story if he cunningly asserted that suspicious stains were made by the blood of a dog) to a toxicologist publishing a treatise, setting forth most faithfully the method by which poisoners may best destroy their victims with the least danger of detection in their crimes.* Be it remembered also, that in all cases a really innocent person, wrongly accused of murder, on the ground of blood stains upon his clothing, etc., actually produced from that "constant" (yet rarely slaughtered) "companion of man," the dog, or from a seal, or otter, needs no microscopist to prompt him into telling (and trying to confirm), *when first arrested*, the *true* origin of the suspicious blood spots.

These various considerations led me to publish my results in a guarded manner, but, now that all responsibility for harm has been removed, I am glad for the sake of the *few* who might draw erroneous inferences from my former papers, to say most emphatically, that I believe we cannot at present distinguish positively, in dried stains, between the blood corpuscles of man, and those of any mammal in which the disks measure on an average over $\frac{1}{100}$ of an inch. Hence, therefore, until further discoveries are made, a microscopist's best efforts at revealing crime can only serve the cause of right and justice in those cases where the criminal's attorneys, in spite of being *forewarned* and consequently *forearmed*, fail to

* The gendarmerie of Valenciennes have just arrested a Dutchman whose profession is, to say the least of it, extraordinary. He is a dealer in all sorts of instruments employed by burglars and thieves. When arrested he had in his possession a large stock of pamphlets giving the fullest directions as to the best plan for waylaying people on the high roads, and also how to kill them without any noise in case of resistance.

prepare or suborn testimony skillfully enough to convince the jury that some dog, rabbit, elephant, monkey, etc., has been killed, in such a way as to produce blood stains which are likely to be confounded with those of the murdered victim. That I was induced to avoid specifically stating this failure of our science by no unfounded apprehension of evil results, is *proved* by the fact that after my evidence was delivered in the Larribee trial at Franklin, Pa., the prisoner's counsel, a "shrewd-witted lawyer," in order to account for spots on the defendant's boots, brought two women into court who testified that the boots were sprinkled as they stood in a corner of the kitchen, by a puppy which jumped away from them just as they got one ear cut, and ran round the room shaking its bleeding head. Further to substantiate this tale, a dog with one ear clipped was shown to the jury, and sworn to as the very one from which the blood was shed. Fortunately, however, it so happened that I had examined two spots on the prisoner's pantaloons, finding them to be human blood, in contradistinction to pheasant's blood, as he first explained them to be, and since the contrivers of this dog story apparently forgot that the pantaloons were not standing up in the boots, to be sprinkled with them, their ingenious theory failed to gain credence with the jurors, who brought in a verdict of guilty. I venture, however, to predict that from this explanatory note, *and* the essay which made it necessary, will spring a host of bloody dog tales to account for suspicious stains on the clothing, etc., of murderers, until even attorneys for the defense become themselves ashamed to put forward this thin, worn-out plea.

In regard to the supposed greater accuracy of Carl Schmidt's observation, that dried and remoistened blood corpuscles shrink nearly one-half, I desire to add that I think it is chiefly accurate concerning specimens of *crenated* corpuscles, such as form when considerable quantities of blood undergo desiccation, and will be pleased at any time to demonstrate the general correctness of my measurements of the disks in the thin films of true *blood stains* (as emphatically distinguished from *masses* of dried blood).—*Am. Jour. Med. Sci.*, April, 1875.

Editors' Book Table.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

DENTAL PATHOLOGY AND SURGERY. By *S. James A. Salter, M.B., F.R.S.*, Member of the Royal College of Surgeons, Examiner in Dental Surgery at the College, Dental Surgeon to Guy's Hospital. New York: William Wood & Co., Publishers. 1875.

The author of this work will be recognized by surgeons as likewise author of the article on "Surgical Diseases of the Teeth," in Holmes' System of Surgery. Having had the advantage of a previous medical education, and some years subsequent practice as surgeon, he comes to his task as an instructor in the department of dental surgery better prepared than the majority of his predecessors who have enriched the literature of this specialty. The chapters upon the anatomy—normal and morbid—of the teeth are unusually full and explicit. Not only the special forms of these organs, and the deformities and irregularities to which they are liable, are elaborated carefully, but their general anatomy, together with that of their accessory structures, are carefully considered.

The subject of the pathology of the teeth is treated comprehensively and in full detail, and in the chapters devoted to the special subject of the nervous relations of the dental apparatus, a wide, and hitherto almost unexplored, field of investigation is opened up to the student. The portion of the work devoted to the subject of the mechanical appliances for the treatment of deformities, displays sound judgment and thorough appreciation of the necessities of each case. We know no better book upon the subject than this volume, and doubt if one so good is within the reach of the American student. H.

ESSENTIALS OF THE PRINCIPLES AND PRACTICE OF MEDICINE. A Handbook for Students and Practitioners. By *Henry Hartshorne, A.M., M.D.*, Professor of Hygiene in the University of Pennsylvania, etc., etc. Fourth Edition. Thoroughly Revised, with One Hundred Illustrations. Philadelphia: Henry C. Lea. 1874.

That three editions of a work should have been already exhausted, and the issue of a fourth demanded in a comparatively short time, is a criticism sufficiently favorable to satisfy the self-love of any author. Nor will we attempt to detract from its force by any unfavorable comments upon one of the best books of its kind extant. Upon general principles, we cannot accord a hearty approval to compendiums as a class, believing that, while they will subserve for some their legitimate purpose, for the majority they will be made pretexts for sciolism. The work is divided into two parts, the first containing four sections, the first of which comprises an excellent summary of general pathology as presented in the morbid states of the system at large and of special organs, concluding with a brief statement of the different modes of death. The second section, upon semeiology, includes symptomatology, physical diagnosis, with descriptions of the operative procedures and apparatus for laryngoscopy, diagnosis of diseases of women, ophthalmoscopy, sphygmography, thermometry, and pneumatic aspiration, with directions for conducting post-mortem examinations and medico-legal investigations in cases of suspected poisoning. In regard to the mode of conducting post-mortem examinations of the spinal cord, we will venture to suggest an improvement upon the "chisel and mallet or saw," for facilitating section of the vertebral arches—a pair of strong cutting pliers, the blades bent at an obtuse angle to the handle. In section third, upon "general therapeutics," we are sorry to see the author holding on with such tenacity to the use of "blood-letting in the treatment of violent inflammations and congestions." This seems like turning the wheels of progress backwards. Part second, upon "special path-

ology and practice," constitutes nearly three-fourths of the bulk of the volume, to which we must object, as being entirely too extensive to be sufficiently comprehensive.

H.

BOOKS RECEIVED.

TRANSACTIONS OF THE TWENTY-FOURTH ANNIVERSARY MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY—Held in the City of Chicago, May 19, 20, 21, 1874.

PAMPHLETS RECEIVED.

ON CERTAIN MORBID ALTERATIONS OF MUCOUS MEMBRANE: Their Influence on Speech and Their Apparent Relations with Diseased Nerve Structure. By *Beverly Robinson, M.D.*, Surgeon to the Manhattan Eye and Ear Hospital, Department of the Throat. Formerly Resident Physician to the Paris Hospitals, etc., etc. Reprinted from the New York Medical Journal, March, 1875. New York: D. Appleton & Co. 1875.

THE NASAL DOUCHE: What it Accomplishes, and What it Does Not. By *Beverly Robinson, M.D.*

THE FOURTEENTH ANNUAL REPORT of the Trustees, Superintendent and Treasurer of the Illinois State Hospital for the Insane, Jacksonville. 1874.

VALEDICTORY ADDRESS to the Medical Graduates of the University of Louisville, March 1, 1875. By *D. W. Yandell*, Professor of the Science and Art of Surgery and Clinical Surgery.

FIFTH REPORT of the New York Ophthalmic and Aural Institute, for the Twenty Months beginning May 1, 1873, and ending December 31, 1875.

CLINICAL STUDIES, with Large Emetic Doses of Ipecacuanha. Reprinted from the Atlanta Medical and Surgical Journal.

ON THE HOMŒOPATHICITY OF ELECTRICITY: Where Indicated, and where Electricity may be Potentized. By *R. N. Tooker, A.M., M.D.*, Chicago. 1875.

A CASE OF REFLEX NEURALGIA, Associated with Urethral Contractions, and a Rare Form of Urinary Sinus, with a Description of the Cold Water Coil. By *Fessenden N. Otis*, Clinical Professor of Genito-Urinary Diseases, College of Physicians and Surgeons, New York. Reprinted from the New York Medical Journal, Feb., 1875.

CHOLERA AND PLANETARY EPIDEMICS. By *Richard Mansell*, Rock Island, Ill. 1875.

JOURNALS RECEIVED.

- L'Anatomie et de la Physiologie, etc., Journal de—Charles Robin. Paris. No. 2.
The American Medical Weekly—Vol. ii, Nos. 14, 15, 16.
The American Practitioner—Vol. xi, No. 64.
The American Journal of the Medical Sciences—No. cxxxviii.
The Atlanta Medical and Surgical Journal—Vol. xiii, No. 1.
The American Journal of Insanity—Vol. xxxi, No. 4.
The Clinic—Vol. viii, Nos. 13, 14, 15, 16.
The Cincinnati Lancet and Observer—Vol. xviii, No. 4.
The Detroit Review of Medicine and Pharmacy—Vol. x, No. 4.
The Dental Cosmos—Vol. xvii, No. 4.
The Eclectic Medical Journal—Vol. xxxv, No. 4.
La Gazette Medicale de Paris—Tome iv, No. 10.
The Indiana Journal of Medicine—Vol. v, No. 12.
The Kansas City Medical Journal—Vol. v, No. 2.
The London Lancet, March, 1875.
The Laboratory, Boston—Vol. i, No. 9.
The Medical Register and Advertiser—Vol. i, No. 1.
The Medical & Surgical Reporter—Vol. xxxii, Nos. 13, 14, 15, 16.
The Medical Record—Vol. x, Nos. 13, 14, 15, 16.
The Medical Times (Philad.)—Vol. v, Nos. 178, 179, 180, 181.
The Medical News and Library—No. 388.
The Monthly Abstract of Medical Science—Vol. ii, No. 4.
The Medical Examiner—Vol. xvi, No. 7.
The Medical Herald, Leavenworth—Vol. viii, No. 10.
The Nashville Journal of Medicine and Surgery—Vol. xv, No. 4.
The New York Medical Journal—Vol. xxi, No. 4.
The New Remedies—Vol. iv, No. 2.
The Practitioner, London—No. lxxxi.
The Pharmacist, Chicago—Vol. viii, No. 4.
The Pharmacal Gazette—Vol. iii, Nos. 64, 65.
The Peninsular Journal—Vol. ii, No. 4.
El Repertorio Jalisciense—No. 9, Tomo i.
The Richmond and Louisville Medical and Surgical Journal—Vol. xix, No. 4.
The St. Louis Clinical Record—Vol. ii, No. 1.
The St. Louis Medical and Surgical Journal—Vol. xii, No. 8.
The Southern Medical Record—Vol. v, No. 2.
The United States Medical Investigator—Vol. i, No. 7.
The Virginia Medical Monthly—Vol. ii, No. 1.

Illinois State Medical Society.

The Twenty-fifth Annual Session will be held in the city of Jacksonville, on the third Tuesday in May (18th), 1875, at 9 o'clock, A. M. The following Committees are expected to report :

Committee on Practical Medicine — E. P. Cook, M.D., Mendota, *Chairman*.

Committee on Surgery — Edwin Powell, M.D., Chicago, *Chairman*.

Committee on Obstetrics — Hiram Nance, M.D., Kewanee, *Chairman*.

Committee on Drugs and Medicines — Wm. E. Quine, M.D., Chicago, *Chairman*.

Committee on Necrology — E. Ingals, M.D., Chicago, *Chairman*.

Committee on Ophthalmology — E. L. Holmes, M.D., Chicago, *Chairman*.

Committee on Otology — S. J. Jones, M.D., Chicago, *Chairman*.

SPECIAL COMMITTEES.

Committee on Diseases of Children — J. O. Hamilton, M.D., Jerseyville, *Chairman*.

Committee on Diseases of Respiratory Organs — H. A. Johnson, M.D., Chicago, *Chairman*.

Committee on Galvano-Therapeutics — David Prince, M.D., Jacksonville, *Chairman*.

Committee on Diseases of Women — J. T. Pearman, M.D., Champaign, *Chairman*.

Committee on Diseases of the Nervous System — J. S. Whitmire, M.D., Metamora, *Chairman*.

Committee on Medical Jurisprudence — R. J. Patterson, M.D., Batavia, *Chairman*.

Committee on Dermatology — Chas. G. Smith, M.D., Chicago, *Chairman*.

Committee on Public Address — J. H. Hollister, M.D., Chicago, *Chairman*.

Each local Society shall have the privilege of sending to the Society one delegate for every five of its regular resident members, and one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital, and every other permanently organized medical institution of good standing, shall have the privilege of sending one delegate.

The Members by Invitation shall consist of practitioners of reputable standing from any part of the United States. They shall receive their appointment by invitation of the meeting, after an introduction from any of the members present, or from any of the absent permanent members. They shall hold their connection with the Society until the close of the session at which they were received, and may participate in the discussions without the right of voting.

The Permanent Members shall consist of regular graduates from reputable schools of medicine, who have served in the capacity of delegates, or such other physicians as may be proposed by two members of this Society, reported on favorably by the Committee of Investigation, and receiving a two-thirds vote of all the members present.

A circular will be sent to each member, from the Committee of Arrangements, giving all necessary information relative to the programme and the arrangements made with the different railroads in regard to reduction of fare, etc.

T. DAVIS FITCH, M.D., *Permanent Secretary*,
286 W. Monroe St., Chicago.

BOARD OF HEALTH, OFFICE SANITARY SUP'T, }
CHICAGO, April 7, 1875. }

Dr. W. Hay, *Editor Journal*:

DEAR SIR—I transmit herewith the report for March, also some figures from our annual report, (the fiscal year ending April 1st). You will see that the decrease is 1,532, compared with preceding year, and 2,131, compared with 1872. The decrease from small-pox was 427 deaths, and the decrease in the number of cases was 1,462; compared with 1872, the decrease was 1,939 cases. The prevalent diseases of this climate show a marked decrease. Taking everything into consideration, the death rate for the year has been very low.

Respectfully,

BEN. C. MILLER, *San. Supt.*

The total number of deaths for 1874	8,025
For the preceding year	9,557
Deaths from small-pox	90
Deaths from small-pox preceding year	517
Decrease	427
Compared with 1872, the decrease was	565
The decrease in the number of cases compared with preceding year	1,462
Decrease compared with 1872	1,939
Decrease by—	
Consumption	10
Convulsions	171
Pneumonia	31
Diseases of the brain	231
Diarrhœa	36
Diphtheria	14
By cholera infantum there were more deaths	66
During the month of March the report of Dr. Reid, health officer, shows:—	
Notices served	1,273
Nuisances abated	759
Articles condemned as unfit for food—	
Quarters of Beef	288
Carcasses of mutton	9
Calves	134
Hogs	21
Fresh meat (lbs.)	1,532
Corned beef (lbs.)	3,460
Hams	311
Shoulders	285
Ducks	13
Dead animals removed during the month	906
Suits brought for violating health ordinance	—

Chicago Mortality Report for March, 1875. Reported by Dr.

BEN. C. MILLER, Sanitary Superintendent.

Accident, by fall	3	Aorta, atheroma of	1
" by drowning	1	Ascites	2
" by railroad	3	Atelectasis pulmonum	1
Abscesses	1	Bladder, inflammation of	1
Anus, imperforate	1	Bowels, congestion of	2
Apoplexy	7	" hæmorrhage of	1
Asphyxia	1	Brain, anæmia of	1

Brain, abscess of.....	2	Jaundice.....	2
" compression of.....	1	Kidneys, disease of.....	1
" congestion of.....	6	" Bright's disease of.....	5
" disease of.....	1	Liver, cirrhosis of.....	1
" inflammation of.....	5	" inflammation of.....	1
" softening of.....	1	Lungs, congestion of.....	7
Bronchitis.....	14	" hæmorrhage of.....	1
" capillary.....	3	Manslaughter.....	2
Cancer of face.....	1	Mania, puerperal.....	1
" of liver.....	4	Measles.....	18
" of stomach.....	3	" typhoid.....	1
" of uterus.....	1	Meningitis.....	8
Cholera infantum.....	1	" cerebro-spinal.....	9
Colon, stricture of.....	1	" tubercular.....	4
Consumption.....	71	Metritis.....	1
Convulsions.....	66	Œdema, pulmonum.....	1
Croup.....	6	Old age.....	13
" membranous.....	1	Paralysis.....	3
Cyanosis.....	2	Pericarditis.....	1
Debility, general.....	4	Peritonitis.....	5
Diarrhoea.....	2	" puerperal.....	3
" chronic.....	1	Pneumonia.....	63
Diphtheria.....	9	" typhoid.....	5
Dropsy, general.....	8	Pleurisy.....	2
Dysentery.....	2	Poisoned.....	3
Embolism.....	1	Pyæmia.....	3
Endo-carditis.....	1	Rheumatism.....	3
Enteritis.....	10	" inflammatory.....	1
Entero-colitis.....	1	Scrofula.....	1
Exposure.....	1	Suicide, by poison.....	1
Erysipelas.....	4	" by hanging.....	2
Fever, congestive.....	1	" by morphine.....	2
" puerperal.....	8	Septicæmia.....	3
" remittent.....	1	Small-Pox.....	3
" scarlet.....	12	Spine, disease of.....	4
" typhoid.....	10	" paralysis of.....	1
Gangrene of leg.....	1	Stomach, softening of.....	1
Gastritis.....	3	Syphilis.....	2
Hæmorrhage.....	1	Tabes mesenterica.....	4
Heart, disease of.....	8	Teething.....	5
" fatty degeneration of.....	4	Tetanus.....	1
" hypertrophy of.....	1	Trismus.....	2
" mitral valves, disease of.....	1	Thrush.....	1
" rheumatism of.....	3	Urine, retention of.....	1
" paralysis of.....	2	Uræmia.....	1
" valvular disease of.....	4	Uterus, hæmorrhage of.....	1
Hemiplegia.....	1	Vitality, deficient.....	2
Hepatitis.....	1	Whooping cough.....	4
Hernia, strangulated.....	2	Unknown.....	1
" congenital.....	1		
Hydrocephalus.....	4		
Inanition.....	9	Total.....	549

Premature births, 7; Still births, 68. Total, 75.

COMPARISON.

Deaths in March, 1875, 549; in February, 1875, 460. Increase, 89. Deaths in March, 1874, 508. Increase, 41.

AGES.

Under one year.....	163	Thirty years to forty.....	67
One year to two.....	49	Forty " " fifty.....	40
Two years to three.....	28	Fifty " " sixty.....	31
Three " " four.....	22	Sixty " " seventy.....	30
Four " " five.....	12	Seventy " " eighty.....	21
Five " " ten.....	13	Eighty " " ninety.....	4
Ten " " twenty.....	20	Ninety " " one hundred.....	—
Twenty " " thirty.....	48	One hundred and upwards.....	1
Total.....		549	
White.....	540	Males.....	312
Colored.....	9	Females.....	237
Total.....		549	
		Married.....	193
		Single.....	356
		Total.....	549

NATIVITIES.

Austria.....	1	England.....	13	Russia.....	1
Belgium.....	1	France.....	2	Scotland.....	6
Bohemia.....	6	Germany.....	66	Sweden.....	8
Canada.....	3	Holland.....	2	Switzerland.....	1
Native—Chicago.....	80	Ireland.....	61	Unknown.....	5
Foreign, ".....	176	Italy.....	2	Total.....	549
U. States, other parts 100		Norway.....	10		
Denmark.....	3	Poland.....	3		

Deaths daily, 17½. Mean thermometer, 31.5°. Rain fall, 1.37 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	6	5,725	one death in 954
2	4	4,830	" " 1,207
3	20	14,861	" " 743
4	18	15,361	" " 853
5	30	20,078	" " 669
6	54	35,916	" " 665
7	42	31,722	" " 755
8	45	29,143	" " 648
9	36	31,654	" " 879
10	16	17,385	" " 1,087
11	18	14,022	" " 779
12	21	16,792	" " 799
13	10	17,892	" " 1,789
14	23	16,720	" " 727
15	56	45,545	" " 813
16	25	21,922	" " 877
17	36	20,777	" " 577
18	24	21,392	" " 891
19	5	4,677	" " 935
20	8	8,995	" " 1,124

497 Ratio of deaths to population in 1874, one death in 720½.

No. deaths in Wards.....	497	Manslaughter.....	2
Accidents.....	7	Protestant Orphan Asylum.....	3
County Hospital.....	6	Poisoned.....	3
Foundlings' Home.....	14	St. Joseph's Hospital.....	3
Home for Friendless.....	2	Suicides.....	6
Hospital Alexian Bros.....	1	Total.....	549
Mercy Hospital.....	5		

THE
Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.: AND WALTER HAY, M.D

VOL. XXXII. — JUNE, 1875. — No. 6.

Original Communications.

ARTICLE I.

EXAMINATION OF BRAIN.

BY JOS. G. RICHARDSON, M.D.,

Microscopist to the Pennsylvania Hospital, Philadelphia, Pa.

The specimen from Dr. Walter Hay's case of Traumatic Tetanus, reached me by Express from Chicago, April 23, 1875, and for an alcohol preparation, arrived in admirable condition.

The medulla oblongata had been cut through obliquely (probably in removing the brain at the autopsy), about three-eighths of an inch below the inferior border of the pons varolii, so that, unfortunately, no portion of the spinal cord was preserved.

Thin transverse sections, cut from the stump of the medulla, and therefore on a plane with part of the roots of the pneumogastriacs, were some of them prepared by

Lockhart Clarke's method ;* others by that of Gerlach, with double chloride of gold ;† and still others by Gerlach's second method, with carmine and ammonia. When examined microscopically, under various powers, ranging from 50 to 2,000 diameters, these specimens did not furnish any evidence of pathological alterations of structure, and especially none of "granular" or "fluid disintegration," such as is described by Clarke in his original paper.‡

Sections cut from about the middle of the pons, and prepared in like manner by these several different processes, afforded similar negative results, as did likewise vertical slices of tissue from the right lobe of the cerebrum, and of the cerebellum, examined in glycerin, and also in oil of cloves.

In the typical example, detailed at length by Mr. L. Clarke, in the article above referred to, he expressly states (p. 258) : "The medulla oblongata and the upper end of the cord, which give origin to the first cervical nerves, were apparently free from disease. At the second cervical nerves, however, streaks and irregular areas of disintegration were observed in different parts of the gray substance, and particularly around the central canal, on the right side of which was a space of considerable size, containing a finely granular fluid, with the debris of blood-vessels and nerves." In Dr. Hay's case, therefore, the results, as far as obtained or obtainable, tend to corroborate Lockhart Clarke's observation, that no structural changes are visible, on microscopical examination, in the brains of patients dying from tetanus.

Neither Dr. W. H. Dickinson, in his excellent report of a case of Tetanus, before the Royal Medical and Chirurgical Society (Med. Times and Gazette, Oct., 1868, p. 460), nor MM. Arloing and Leon Tripier, in their Experimental and

* Frey Microscope and Microscopical Technology, Transl. New York, 1872, p. 354.

† Stricker's Histology, New Syd. Soc. Transl. London, 1872, vol. ii, p. 344.

‡ Medico-Chirurgical Trans. London, 1865, vol. xlviii, p. 255.

Clinical Researches on Tetanus (*Archives de Physiologie normale et Pathologique*, Tome III, 1870, p. 235), nor Ranke, in his *Physiologico-Chemical Study of Tetanus* (for an abstract of which see *Prager Vierteljahrschrift für die Praktische Heilkunde*, 1866, 89 er Band, Analekten, S. 106), refer to cases in which lesion of any part of the brain was discovered on post mortem examination.

In conclusion, I would express my regret, first, that unavoidable circumstances prevented the gentlemen making this autopsy from securing at least the upper portion of the medulla spinalis; and, second, that subsequent investigations were necessarily performed upon the specimens after they had passed beyond that fresh condition which alone admits of the best preparation and the most satisfactory research.

ARTICLE II.

HEREDITARY TRANSMISSION AND VARIATION BY DESCENT.

Dr. Brown-Sequard, a gentleman who is a foster-parent of physiological science, but a terrible bane to guinea pigs, says, from a late series of experiments upon these little animals, that injuries to the parents result in analogous lesions in the children even to the extent that a young pig is born without toes, of parents from whom the toes have been removed artificially. Some of his conclusions concerning the hereditary transmission of morbid states to many animals, caused in either one or both of their parents by some injury to the nervous system, are as follows:

1. A change in the shape of the ear, of those animals in which such a change was caused by a division of the cervical sympathetic nerve in the parent.

2. Partial closure of the eyelids, in animals born of parents in which that state of the eyelids had been caused,

either by section of the cervical sympathetic nerve, or by removal of the superior cervical ganglion.

3. Dry gangrene of the ears, in animals born of parents in which these ear alterations had been caused by injury to the restiform body.

4. Section of the sciatic nerve has been practiced in animals, with the result of rendering portions of the foot anæsthetic, which portion was eaten off by the animal, and the result was the production of the same deformity in its offspring for three generations; thus showing that the sciatic nerve acquired the inherited power, in the congenitally toeless animal, of transmitting this peculiar deformity.

The law of hereditary variation in species, of plants, animals and man, is the cause of their respective varieties. Every organism bears a general resemblance to its parents, but it is equally true that no organization is exactly like its parent—it differs in numerous traits of more or less importance. No two plants are alike, and no two animals exist without difference. It is almost incomprehensible what variation there is in human beings. It is strange, indeed, that there can be such differences in the human face, and yet so many be considered good looking.

Charles Darwin, who has immortalized himself—and the monkey—has probably made more investigations on the subject of variation of species than any other man. His experiments were made upon pigeons. Beginning with a pair of the original stock—the rock pigeon—he succeeded, by his favorite and celebrated methods of “Sexual selection” and “Survival of the fittest,” in producing about one hundred and fifty varieties of pigeons.

Another instance in point was the Ancon sheep, a variety at one time well known in this country. The stock originated in 1791, in a flock of sheep consisting of one male and thirteen females, owned by Seth Wright, a farmer in Mass. Of this flock a lamb was born of very peculiar formation. It had a very long body, very short

legs, and the legs were bowed. The lamb was a male, and Wright, anticipating Darwin, bred from this male, and in time produced a flock of an entirely new variety of sheep. The variety was, however, lost afterward by mixture with other varieties. Darwin concludes, therefore, that all the varieties of plants, animals and man originate in the great law of hereditary transmission and variation by descent. Regarding the human species, therefore, I am not one of those who can believe otherwise than that all varieties sprang originally from a single pair, nor can I see any good ground whatever, or any tenable sort of evidence, for believing that there is but one species of man. Nevertheless, as there are great numbers and varieties of plants and animals, so are there many remarkable varieties of men. I speak not particularly of the distinctions in races, but there are some most astonishing varieties in men of the same race, in regard to structural development, especially to the structural development of that dominant organ, brains. In the human species, also, the transmission of abnormal structures occurs. A very notable instance was that of a Maltese, named Gratio, who was born with six fingers on each hand. He married a woman with the usual number of fingers, and they had four children, two of whom had the same deformity. This deformity was lost after the third generation. It is plain to be seen that had members of this family intermarried, there would have been a six-fingered variety of mankind, but their "sexual selection" was under their own control, and the peculiarity was swallowed up in pure blood, or, more strictly, pure nervous influence. Cleft palate, club foot, and kindred morbid variations and vagaries of human generation, depend upon the same cause. When Darwin can take a pair of monkeys and pen them up, and by controlling their sexual selection, nursing their varieties, killing the weakest, so as to allow the survival of the fittest, and bring out a new Adam and Eve as the result of his breeding, faith will increase in his doctrines.

Hereditary transmission of disease in human subjects—our patients—is subject to the same rules as variation of the species. Brown-Sequard, in the course of his investigations into the causes of epilepsy, discovered a method by which epilepsy could be originated. Guinea pigs were of course the victims upon which he operated, and eventually he discovered the remarkable fact, that the young of those animals upon which he had produced epilepsy, were epileptic. The artificially produced epilepsy in the parents, caused constitutional epilepsy in the young. Here then we have an instance, which, standing alone, decides the question. We have a special form of nervous disease, not caused by any natural variation of structure or of function that has arisen spontaneously in the organism, or caused directly to the nerves by mechanical injury. There is the special form of nervous aberration confirmed by repetition. The fits are more readily and easily induced, until there is established the epileptic habit, that is, the various actions constituting the fit produce in the nervous system such structural changes, that result in repeated epilepsy, and affecting the reproductive centres, cause them to produce organisms with the same epileptic tendencies. Statistics show that one-half of the epileptic cases are directly traceable to inherited tendency.

Scrofula and syphilis are types of hereditary diseases. Their laws of transmission are well understood by the medical profession, and are subject, in cause, origin and transmission, to the same laws as the transmission of variation in species. They *are* simply the variations of the species of human beings, that we term disease, because they are negative variations, and the tendency is to dissolution of the organism.

There is another property of hereditary transmission which I will now bring forward, called atavism. It is taken from a word meaning ancestor, and means that peculiar ancestral traits may skip over a generation or two, and then reappear. It also refers to the tendency in

species to preserve their integrity against variation. In medicine, it covers the ground expressed by "*Vis medicatrix naturæ*." One is often surprised to see a black lamb, or one with black spots, in a flock of white sheep, but generally his darkness can be traced to his colored ancestral parent. Instances still more remarkable, in which the remoteness of the ancestors is very great indeed, are quoted by Darwin. He reports that in crosses between varieties of the pigeon, there will sometimes reappear the plumage of the original rock pigeon, from which these varieties descended. By atavism, varieties of species are sometimes lost—they recover the original form of the species from which the variation occurred, as in the instance of the Ancon sheep. Instances have been known in the human family, generally those inhabiting the sunny South, where a black baby has suddenly and unwelcomely made his appearance and paled his white ancestors with terror. In such cases, the peace of families is *sometimes* restored by the resurrection of the long-buried secret, that away back among the blooded ancestry, there had been a little unfortunate miscegenation. By means of atavism, or dilution with pure blood, human sins are washed away, as well as the vagaries and variations of human genesis. Diseases are only kept from engulfing the world, as the Asiatic deluge, by the mixture of pure blood as well as—the skill of the physician.

King David may have had a glimmering inspiration of this idea, when in his tottering age he took unto himself a young and blushing bride, that he might rejuvenate himself, but David was duly "gathered to his fathers."

The causes of variation in heredity. These are difficult to define, but may be enumerated as the external, internal, and spontaneous. Some cases of the external, as the operations of Sequard and Darwin, are well enough understood. Doubtless in nature the external causes are similar. The influence of climate, temperature, food, air, light, and the struggle for existence, have had the most to

do with the variation and development of all species and their diseases in plants, animals and man.

As an instance of the influence of climate and social conditions upon the human species, I will refer you to one of the ruling elements of our society and body politic, the Irishman. This race, in this country, is an illustration of what external causes of variation can do. The difference between the general appearance, and mental and moral idiosyncrasies of the "Paddy from Cork" as he treads the bogs of his native "green isle of the sea" or appears in Castle Garden, N. Y., on landing from the emigrant ship, and his grandchildren, born and educated in America, is truly marvelous. The third generation of Irish in this country, is completely Americanized, in fact they are, in a large proportion, the Americans of to-day. The Irishman when he emigrates leaves his "Donnybrook fair," and generally his "shillalah," behind him, and, in the second generation, the "rich brogue" and many other Irish traits disappear, and the third generation is born American indeed and in truth. The Irishman in America must, by force of external causes, be wholly, and only, American.

The influence of light in variation of species, is beautifully illustrated in the eyeless fish of the great Mammoth Cave of Kentucky. The ancestors of these fish were undoubtedly at some time, by some means, introduced from without into the cave, and had eyes, but, being unable to escape and being in total darkness, there was no necessity for eyes, and as generation after generation was produced, the organs of sight gradually and entirely disappeared.

In view of these facts, the question would not seem to be, what variation in species *can* external causes produce, but what can they *not* produce.

I will only hint at the internal causes, for it implies too much biological knowledge to explain fully and to understand. By saying that every organism to exist must retain a due balance between its internal organic life

forces, and those forces to which it is subject externally, it will be seen that this due balance may not always be adjusted perfectly, and in fact seldom is, and may be so far differentiated as to cause error of nutrition, disease, or some other variation, by disturbance of internal forces.

By spontaneous cause, is not meant exactly chance cause, but in reality it means that very little is known about it. Spontaneous, in science, and etiology, in medicine, means that the scientist and the physician don't like to say, I don't know—and so say, spontaneous. Perhaps a good illustration of these causes combined, may be found in the action of the mother's mind upon some peculiarities of the structural formation of her unborn child. Scientists and physicians have labored enthusiastically over what they term, or would term, if they could find it, spontaneous generation. They have hunted, as the alchemists hunted, for the elixir of life and the philosopher's stone, while the theologian has looked over their shoulders with bated breath, but with the smile of derision ready. One enthusiast watched an hermetically sealed tube containing a little grass and water, sixteen hours, through his microscope, for the bacteria which, like the old woman's soap, wouldn't come. The question may be asked, Where is the seat, or the immediate influence exerted that produces variation? Undoubtedly it is in the nervous system; whether the cause be external, internal, or spontaneous, its influence *must* be upon the nervous system, and there the impression is made that causes variation in the species, structural or pathological. Brown-Sequard's cases prove this. It is a hard blow to humoral pathology. The nervous system receives all impressions, and it is only the nervous system that can remember them and cause them to reappear, and so faithfully transmit them.

Now, then, how are variations transmitted? There is such a thing as a physiological unit. It bears the same relation to organic life that the unit or atom of matter

does to the material universe, or that the number one does to mathematical science. The unit of matter, the atom, contains all the properties of the kind of matter to which it belongs. The unit of numbers contains all the properties of mathematics. The simplest form of figures may be found upon the schoolboy's slate, and perhaps a few upon the page of the physician's daily pocket record, but the combinations of these figures solve the problems of Euclid, and measure the distances between the fixed stars. The physiological unit, or the primal element of life, which men have so long looked to see spontaneously generated, contains all the properties of organic life. Its simplest form is the bacteria, the algæ, and the cell-life that we see coloring with a green tinge the surface of ponds of water. Its highest form is the illustrious ego, or man himself.

In generation and transmission, the germ-cell, and the spermatic-cell, are simply the vehicles, or common carriers of the physiological unit. The units meet, each carrying in its nature and constitution the heredity, the variations, the disease of the parent of the new organism about to be created. It is nature's most wonderful process. The units blend, unite, perhaps some variations of opposite character in the two units are cancelled, and here is one of nature's methods in atavism, new forces by their union are generated, and the result is, a new organism begins its development, with its character to a great extent predestined, as well as its heredity, by the physiological unit. We do not suppose that Calvin thought of this when he taught his doctrine of predestination, but for a man who was hunting in the dark, he came very near the truth. The two great contending elements in social life, science and religion, can be reconciled, if both will kneel humbly and learn of the physiological unit.

Gentlemen, to paraphrase an old saying: Take care of the units and the organisms will take care of themselves. Physiologists and scientists have satisfied them-

selves that the mind of man, his intelligence, his consciousness and moral nature depend upon the structure and physiological action of his brain. We are conscious living beings, only when the brain is in action. The existence of a separate entity, the soul, or spirit, operating through the brain, is believed by the greater portion of mankind, but it is certain, from observation, that man's mental status and moral nature are hereditary, and subject to the same laws as variation in every other respect. Physiologists have demonstrated that the gray cerebral cells of the cerebrum in action, generate the phenomena of thought and consciousness. Then mind, being directly one of the results of the combined action of the nervous system, what is so likely to be transmitted as mental peculiarities? The criminal beget criminal, the insane beget insane, as well as the gouty and scrofulous beget their kind. Religion may stand in the relation of a physician to the perverted, diseased moral nature, but to trace the analogy farther, there are so many quack religions in the world, that, though many are called, few come, or are chosen—that is, are cured.

Civilized nations have always had the care of the insane, and the criminal varieties of the human species, and have suffered thereby as individual organisms have by disease. It will probably always continue to be so, for there will probably never be mixture of pure blood enough to destroy the varieties by atavism, and the good will not bribe legislatures to condemn the wicked, the diseased, the monstrous, to eternal celibacy, and if they did, some of them would undoubtedly occasionally jump the fence, so to speak, and propagate their special variety by hereditary transmission and variation by descent.

Progress in Medical Sciences.

ARTICLE I.

PROGRESS OF SURGERY.

By JNO. E. OWENS, M.D.,

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1. Alleged Rotation of the Ulna. By THOMAS DWIGHT, Jr., M.D. (*The Boston Medical and Surgical Journal*, March 11, 1875.)

2. Salicylic Acid. (*The Boston Medical and Surgical Journal*, March 11, 1875.)

3. Operative Means for the Relief of Patients Suffering with Advanced Prostatic Disease. By Sir HENRY THOMPSON. (*London Lancet*, March, 1875.)

4. Cotton-Wool Dressing for Wounds. (*The Boston Medical and Surgical Journal*, March 18, 1875.)

1. Dr. Dwight denies the alleged rotation of the ulna, "as held by Dr. Lecompte."* The demonstration of the latter consists in inclosing the wrist in a metal ring large enough to allow it to turn, and in noticing that as the hand is rotated the end of the ulna undoubtedly changes its place. It is hard to believe, says Dr. Dwight, that the ulna does not move; but the following experiment, which he has tried several times, shows conclusively that the appearance is deceptive: Rotate the arm of a cadaver, and observe the same apparent movement of the bone that is seen in life; then make a small incision down to the bone on the styloid process of the ulna, and drive a large pin firmly in. On fixing the humerus and repeating the rotation, it will be seen that the pin does not move.

2. Upon the authority of Prof. Kolbe, salicylic acid has been employed, in the lying-in hospital of Leipsic, to the exclusion of carbolic acid, since July last, for dis-

* Archives Generales de Medecine, August, 1874.

infection of the hands, in vaginal douching, etc., in solution in water of one part in three hundred to one part in nine hundred, or as a powder mixed with starch in proportion of one part in five. This use of salicylic acid has been attended with such successful results, that it is recommended in the strongest terms for use in obstetric practice, by the authorities of the hospital. Prof. Kolbe suggests that physicians, and especially hospital physicians, should study the action of salicylic as a medicine, whether and in what quantity of larger or lesser doses it will influence scarlet fever, diphtheria, eruptions, syphilis, etc.; and whether it may be used against *pyæmia* and the *bites of dogs*. To prove the innocuousness of salicylic acid, Kolbe took, for several consecutive days, seven and a half grains daily in water, (one part to one thousand) without the slightest observable unpleasant effect. After an interval of eight days he took for five consecutive days fifteen and a half grains daily, and then for two days twenty-three grains in alcohol each day. The digestion was perfectly normal; no trace of salicylic acid could be found in the urine or fæces. (Perchloride, the test, gives an intense violet color). At no time was there the slightest discomfort. Prof. Kolbe and eight of his students repeated the experiment. Each took on the first day one gramme ($15\frac{1}{2}$ grs.), and on the second day one and a quarter grammes, of salicylic acid. Not one of them was able to observe the slightest derangement of any organs.

C. Neubauer (a pupil of Prof. Kolbe) has experimented with salicylic acid to determine the quantity necessary to arrest fermentation in solutions of sugar and in new wine. He found that one gramme of salicylic acid is adequate to make 0.98 gramme of pure yeast (weighed dry) in ten litres (about ten quarts) of new wine incapable of fermentation.

We anticipate gratifying results from the employment of salicylic acid in surgery.

3. Sir Henry Thompson adds another method of relief

to patients suffering from "advanced prostatic disease." By this term, the author refers to the last stage of complete or permanent obstruction existing at or about the neck of the bladder—obstruction to the outflow of urine by natural efforts. When obstruction is not only complete but permanent, disease of the prostate is mostly the cause. Having already gone over the ground, Sir Henry merely reminds his audience (at University College Hospital, London,) that very many individuals between fifty-five and sixty years of age begin to be unable to expel entirely the contents of the bladder. The act of micturition is more frequently performed, and requires some effort; the stream grows feeble, and, under the influence of external cold, or of some diuretic act distending the bladder, or other cause, it often happens that complete or nearly complete retention is established. In such cases of hypertrophy, the bladder is generally not emptied at any act; and if, immediately after an attempt to do so, a catheter be passed, a notable quantity will be left behind, and is drawn off by the instrument. Under these circumstances the patient is taught to use the catheter twice, three times, or more frequently, according to his necessity, in the twenty-four hours. With increase in age the bladder often requires relief six, seven or eight times daily. In some cases, which happily are only exceptional, a more advanced stage arrives, by gradual steps, associated with a greatly diminished capacity of the bladder, so that the use of the catheter becomes necessary from sixteen to twenty-four times, or more, in the twenty-four hours. One can easily imagine the extreme misery, loss of rest, fatigue which such a condition entails. At such a stage, the augmented volume of the prostate sometimes makes the canal difficult to traverse alike for the patient and the surgeon. Should a false passage be made at this crisis, the result is almost necessarily fatal. Such a patient then exists for little else than to pass his catheter. No sooner has he obtained a half hour's relief, than he begins to feel the warning of

another approaching call. His powers are tasked to the utmost, continuous sleep is out of the question, and health rapidly declines.

The method of relief referred to consists of a proceeding similar to that which we employ in the trachea when death is imminent for want of air, viz., the introduction of a tube beyond the seat of obstruction—one which is to be permanently retained there as the constant channel for urine, just as the tracheotomy tube has been for many a patient the only channel during years for air to the lungs. The proceeding proposed, the puncture of the bladder behind the pubes, differs from ordinary puncture, and more resembles the high operation for stone, being rather a compound of the two. The operation consists in passing a large sound, hollow throughout, with a strongly marked curve, and closed by a bulbous-ended stylet. The instrument is introduced by the urethra until the end can be felt just behind the symphysis pubis. It is then confided to an assistant to retain in its place. The operator now makes an incision not more than three-quarters of an inch in length, less if the patient is not stout,—enough to admit the index finger tightly, since a larger opening becomes embarrassing subsequently,—in the median line at the upper margin of the symphysis. The tissues are separated by the finger, and the linea alba being next slightly divided by the point of a bistoury, the finger is passed down closely behind the symphysis, and when the end of the sound is clearly felt, a little opening is made, in order to expose its point. The operator now taking the handle of the sound in his left hand, makes the end protrude in the wound, the bulbous stylet is withdrawn, and he passes a tube in its whole length into the hollow channel of the sound. The supra-pubic tube, (elastic gum) is about two and a half inches long, and fitted to a silver plate. The withdrawal of the sound leaves the tube in the bladder. The tube must be securely fastened with tapes and plaster, and worn a few days in bed until the parts are con-

solidated, after which the patient can move about with safety.

It is important that the wound be as small as possible. A large wound is more painful, and is constantly traversed by the urine.

4. G. B. S., in his "Letters from Paris," reports favorably upon the value of M. Guerin's cotton-wool dressing for wounds. He reminds us that this dressing has now been in use about five years in Paris, and may be fairly considered "to have made its proofs." Last May, Monsieur Guerin submitted to the Academie des Sciences a paper upon the influences of ferments in surgical maladies, upon which paper a committee, composed of such men as Claude Bernard, Pasteur, Sedillot and Larrey, lately presented a report. The Societe de Chirurgie, at a late meeting, decreed the Duval prize to M. Hervey, a former "interne" of Guerin for a very elaborate paper upon cotton-wool dressing in practice. The paper of the latter considered simply the theory of the dressing.

However much the difference of opinion among the best authorities as to the theory, the practical usefulness of cotton-wool as a dressing is generally accepted.

M. Guerin expressed himself to the correspondent as continuing entirely convinced of the merits of his system, and quite content to await the verdict of posterity. He insists upon the action of the cotton as a filter; the air reaches the wound, but leaves upon the way its noxious accompaniments; the pus beneath the cotton undergoes a chemical decomposition, entirely different from putrid fermentation. The pus, examined under the microscope, is found to have lost its globules, and presents the appearance of a fatty emulsion.

A quantity of fresh pus was carefully inclosed in cotton-wool, in such a manner as to avoid previous contact with the external air. At the end of forty-two days it had no putrid odor, and microscopically showed no traces of any living corpuscles; there were neither bacteria nor vibriones.

Another portion of pus, taken with less care, and preserved beneath a less thick layer of cotton, gave out at the end of three weeks the usual putrid smell, and showed great numbers of vibriones.

He has renounced the earlier practice of wetting the dressings with disinfecting solutions, as it injures the filtering properties of the cotton.

In the report presented to the Academie des Sciences by M. Gorselin, in behalf of the committee above mentioned, although the theory of M. Guerin is left as an open question, the practical value of the dressing is abundantly recognized, and recommended to the careful attention of surgeons. The general opinion is that the cotton-wool is particularly useful as a dressing in amputations of the limbs when not too high up, less desirable in compound fractures and resections, and to be rejected in amputations of the breast.

The Boston Medical and Surgical Journal, August 27, 1874, contains a communication* from Thos. B. Curtis, M.D., of Boston, entitled "Cotton-Wool Dressing for Wounds." The practical details of the treatment, and other facts connected therewith, are thus set forth in Dr. Curtis' paper :

In December, 1870, Alphonse Guerin, Surgeon of the Paris Hospitals, now at the head of the Surgical Service at the Hotel Dieu, instituted a new dressing for wounds, consisting, mainly, in the use of cotton-wool, which is applied in very large quantities around the wounded limb, rendered firm and compact by tightly applied bandages, and left undisturbed for *several weeks*.

During the Franco-Prussian War, and during the Commune, the mortality among the wounded soldiers in Paris was very great, chiefly from pyæmia and other forms of hospital infection. Dr. Guerin was led to make experiments, with a view to discover some means of averting the terrible complications which make death

* Read before the Massachusetts Medical Society, June 2, 1874.

the almost inevitable result of every gun-shot wound, however treated. Believing in the germ theory of putrefaction and of septicaemia, and knowing the power of cotton-wool to deprive air of the putrefactive particles which it carries, he devised the cotton-wool dressing, and at once put it in practice in hospitals where his own practice and that of his colleagues had, till then, given the most disastrous results. His efforts were crowned by immediate success; and other surgeons, surprised at seeing his cases of amputation on the way to recovery, soon followed his example, and were similarly rewarded. Tyndall had already shown, by his experiments with a beam of sunlight traversing a dark space, that a sufficient thickness of cotton wool would arrest the solid particles conveyed by air in the shape of dust; and Pasteur had established the fact that urine, boiled and put away in flasks stopped up with cotton-wool, did not undergo putrefaction.

For surgical dressings, the wool itself must be of good quality, tolerably white and clean, and free from foreign matter; if possessed of a glazed surface, this must be stripped off, and the sheets of wool, torn into long strips about a foot wide, must be rolled up so that they may be methodically applied around the part to be dressed. It is difficult to believe what an enormous quantity of wool may be used in a single dressing. Guerin has sometimes used as much as four pounds. The usual fault is to apply too small a quantity of wool. Besides the wool in sufficient quantity, a number of rolled bandages, two inches wide and eight or ten yards long, must be at hand.

The supply of bandages must be ample, as may be recognized when it is known that the bandages removed from some of Guerin's dressings have amounted in all to 150 or 200 yards.

The operation and the dressing should never be performed in a septic atmosphere; never in the wards. The wool should be kept in bales, out of reach of contamination by the air of the surgical ward.

Guerin expressed his intention of following the advice of Pasteur, to purify his wool by subjecting it to a temperature of about 400° F. After cessation of all hæmorrhage, the wound is washed out with a one per cent. solution of carbolic acid. Guerin uses silk ligatures and cuts the threads off short, except one end of the ligature which holds the main artery.

The first step varies according as immediate union is or is not to be sought. In the first case, sutures can be used, unless the surgeon has acquired sufficient skill in the application of the dressing to be able to secure accurate coaptation of the flaps by the pressure of the cotton. If immediate union is not to be attempted, and such is the practice generally preferred by Guerin, the space between the flaps is to be completely filled with little wads of loose cotton. Then the sheets and rollers of cotton-wool are to be wrapped and wound over and around the limb, evenly and methodically, so as to surround it with a homogeneous mass of even thickness, which must in all cases extend beyond the first joint above the seat of amputation.

To fix the cotton-wool securely by means of the bandages so as to prevent its getting displaced, and to apply, through its superincumbent mass to the parts beneath, a very considerable degree of elastic compression, is in Guerin's eyes, a very important factor of success in the use of his dressing. Gradually the cotton-wool gets covered at every point by the successive overlapping turns of the roller, which grows tighter and tighter as the application progresses. When completed, the dressing forms a firm, smooth, hard mass, of uniform consistency.

If all go well, the dressing may be left undisturbed for two or three weeks. The *state of the dressing*, and the *general condition of the patient*, says Dr. Curtis, will furnish the requisite information as to the condition of the wound.

Guerin formerly reapplied the wool, sometimes two or

three times, till the wound was completely healed, but it has been recognized that *after a certain stage of reparation was reached, further progress was very slow under the cotton-wool.* His practice now is to remove the first dressing at the end of the second, third or fourth week, then if the bone be well covered, the space between the flaps filled to a great extent with granulations, and the sanitary condition of the wards tolerably good, he brings the flaps together with plaster, and applies an ordinary dressing.

Dr. Curtis concludes his interesting paper with the following brief recapitulation of the merits and demerits of Guerin's dressing :

Advantages. — 1st. Entire or partial prevention of pyæmia, erysipelas, and hospital gangrene. 2nd. Painlessness. 3rd. Immobility of the injured parts, to which, with the firm but even compression, is due the antiphlogistic action of the dressing. 4th. The rarity of the dressings. 5th. The transportability of the patient, whose injured limb is protected from all chances of mechanical injury.

Disadvantages. — 1st. The necessity of ceaseless watching of every case by all the means at our command, including the daily use of the thermometer. 2nd. The slowness with which the last stages of reparation are effected under the cotton-wool. 3rd. The more or less disagreeable smell which the dressing generally acquires.

The cotton, it is said, acquires the disagreeable smell when applied to a sound limb for the same length of time.

Hospitals.

ST. JOSEPH'S HOSPITAL.

Service of Prof. MOSES GUNN, M.D.

TRAUMATIC TETANUS.

Mary Binz, Irish—married to German—æ.t. 34. On the 19th of February, 1875, sustained a comminuted fracture of the lower third of the tibia and fibula, with compound dislocation of the ankle joint—Potts' fracture—and was admitted to St. Joseph's Hospital, February 25th.

March 2, at 8.00 P.M., complained to the Sister in charge, of sore throat and difficulty of swallowing. Was seen at 11.00 P.M. by Dr. Scheppers, the House Physician, who directed whisky and morphia. The first, she refused to take; of the second, she had one and a quarter grains in divided ($\frac{1}{4}$ gr.) doses during the night.

March 3, 10.30 A.M. Was seen by Dr. Hay. At this time her pulse was 130; respirations, 22, easy; temperature, 99.3°; she was bathed in hot sweat, her jaws were firmly clenched, the masseteric, sterno-cleido-mastoid and trapezius muscles quite rigid and hard to the touch. She swallows with difficulty, holds out her under lip with the thumb and finger of each hand to receive wine, her pupils are slightly contracted—probably from the morphia, the conjunctivæ are injected, and the face flushed. Dr. Hay ordered whisky, fl. ʒj, to be given every hour, and came to the city—four miles—to procure some ext. of calabar bean. Some of the fluid extract, said to contain one grain of the solid extract to the drop, was furnished by Messrs. Gale & Blocki, pharmacists, No. 85 South Clark street, of their own preparation.

At 4.15 P.M., the condition of the muscles was unchanged, except that the abdominal muscles were involved. The pulse was 150; respirations, 24; and tem-

perature, 99.8°. Dr. Hay injected one drop of the extract of the calabar bean—*physostigma venenosa*—diluted with ten drops of water, into the right arm. The patient asked to be raised, “to get the wind off my stomach.” As she was lifted, the muscles became hard and the entire trunk rigid, so as to be elevated as one piece by the hand placed under the occiput.

She swallows the whisky with difficulty, holding out the under lip with the thumb and finger and both hands to receive it, sucking it between the interstices of her clenched teeth. She talks better, her intellect is perfectly clear, and she laughs and talks cheerfully of death, which she knows to be inevitable, saying, through her tightly closed teeth, “When I am dead you can raise me and cut me up and find out all about it,” without manifesting any repugnance at the idea.

Prof. Gunn arrived—in response to a telegram from Dr. Hay—at 5.20 P. M., from which time the treatment was conducted by these gentlemen jointly. At this time there was marked relaxation in the rigidity and diminution in the hardness of the muscles, the pupils were contracted likewise, the specific effect of the *physostigma*—1 gr.—injected at 4.15, being thus doubly demonstrated. Pulse, 155; respirations, 24; temperature, 99.8°; the injection was repeated.

At 5.35 P. M., the muscles were softened but unequally, those of the right side more than those upon the left; the relaxation of the masseters admitting the opening of the jaws to the extent of a line. The patient was much distressed by the mucus accumulated in her mouth, by reason of her inability to swallow. The sweat was not so copious, and the respiration rather abdominal than thoracic. Dr. D. Q. Scheppers kindly volunteering to watch the case through the night, was left in charge, with instructions to repeat the injections sufficiently often to secure muscular relaxation, and the doses of whisky, beef essence and milk, as she could be induced to swal-

low. Dr. Scheppers' notes, taken throughout the night, are as follows :

"Eight P. M., pulse, 140 ; respirations, 22 ; temperature, 98.4° ; easy, contented. Injected one drop. 9.00 P. M., "wants to sit up and have back beaten ;" pulse, sitting up, 142 ; respirations, 23 ; temperature, 100°. Injected one drop. 10.00 P. M., pulse, 144 ; respirations, 22 ; temperature, 100.2° ; passed about f 3 ij of dark urine—the first since the onset of the attack, twenty-six hours—is very restless, wants to be moved often ; complains of great pain in the foot—the fracture—when moved. 11.00 P. M., very restless, wants a drink, but refuses it when offered. Pulse, 150 ; respirations, 24 ; temperature, 100°. Fans herself. Injected one drop. 12.00, midnight. Pulse, 150 ; respirations, 24 ; temperature, 100° ; fans herself ; is very easy ; calls for water continually, says "the cramps are coming up on me." Gave the "Sister" instructions about disposition of her clothing after her death. 12.30 A. M. Perspires ; wants to be raised ; is very rigid ; refuses to take whisky, persistently ; "wants the doctor to go to bed," for she will take nothing more and will not allow him to touch her. Pulse, 144 ; respirations, 24 ; temperature, 100° ; rests a little. 1.15 A. M. Perspires, refuses to take anything. Pulse, 144 ; respirations, 24 ; temperature, 100° ; rests a little. 2.30 A. M. Perspires ; pulse, 142 ; respirations, 24 ; rests a little ; feels very hot. 3.30 A. M. Pulse, 128 ; respirations, 24 ; sleeps, resting quietly, then wakes groaning with a spasm—says "it comes from my stomach to my head ;" at intervals of from five to ten minutes wants to be fanned ; "can't swallow." 5 o'clock, A. M. Injected one drop ; pulse, 140. 7.30 A. M. Pulse, 132 ; respirations, 24. 8.15 A. M. Injected one drop. 9.15 A. M. Pulse, 138 ; respirations, 24 ; temperature, 100°. Injected one drop."

March 4, 10.00 A. M. Drs. Gunn and Hay arrived, found patient much changed for the worse ; her countenance has assumed the characteristic anxious and aged look, is

much flushed and the forehead wrinkled ; reflex irritability is greatly exaggerated ; the jaws are tightly closed. She has still voluntary control over the facial muscles, except those supplied with innervation from the motor division of the fifth nerve. She complains of great thirst, but the application of a wet rag to her lips excites spasm, as does also touching the bed, and of "pain rising from the stomach to the throat ;" is sweating profusely. The spasms extend from the diaphragm upward, and as far down the upper extremities as the elbows, the forearms and hands being exempt. Pulse, 140 ; respirations, 32 ; temperature, 100.8°. Two drops of the physostigma extract were injected into the arm, and instructions given to repeat a similar dose hourly. Her intellect was perfectly clear, and her mind composed.

Dr. Scheppers' report from this hour is as follows :

"11.00 A. M. Injected two drops of the extract. 12.00 M. A spasm occurred, which continued about a minute ; she became purple in the face, was very rigid, and was thought to be dying. At 1.00 P. M. two drops were injected. At 1.30 P. M. her pulse was 160—"too fast to be counted ;" respirations, 30 ; temperature, 101°. She "wished she could have a good drink of water." 2.00 P. M. Pulse, 158 ; respirations, 30 ; temperature, 101°. Calls for water, which she cannot swallow. Injected two drops. At 3.30 P. M. injected two drops ; pulse 160 ; respirations, 28 ; temperature, 101°. Takes a few drops of wine. The injections "hurt her very little ;" she "can hardly feel the puncture of the syringe." Sat up twenty minutes. 4.30 P. M. Pulse, 148 ; respirations, 38—during spasm, 64 ; injected two and a half drops. 5.30 P. M. Violent spasm ; face and upper extremities purple. Five minutes after the subsidence of the spasm the pulse was 162 ; respirations, 44 ; resting quietly. Injected two drops."

At 6.30 P. M., Dr. Hay arriving, found the patient much worse. Her appearance was now truly frightful ; the face was almost scarlet in color, covered with wrinkles, more especially upon the forehead, as if she had become

twenty years older within six hours. She was bathed in hot sweat ; her lips were livid, shrunk and dry ; her teeth firmly clenched ; her hands and forearms very cold and wet, contrasting strongly with the intense heat of the face and trunk. The pulse was 116, thread-like and irregular ; the respirations 40, largely abdominal ; the temperature, 102°. Three drops of the calabar bean extract were injected. The spasms recurred now at intervals of about two minutes, four or five in succession, of about five seconds duration each. The muscular rigidity was diminished, the muscles being quite soft in the intervals of the spasms. At 6.50 P. M., the pupils contracted unequally. At 7.40 P. M., four drops of the extract were injected, at which time her pulse was 140, irregular ; respirations, 40 ; temperature, 101.7° ; her mind perfectly tranquil and demeanor composed, except when interrupted by the prolonged cry which accompanied each spasm. The abdomen was largely distended. She describes the pains as coming up from the pubes—which she indicates with her hands—to her throat. Asked if she could live through the night, thinks “she cannot stand the pain,” but is “perfectly reconciled to die.”

From 9.00 P. M., the “Sister” in charge kept notes of the case as follows :

“10.40 P. M. Pulse very weak and slow, 20 ; temperature, 90°. 11.40 P. M. No pulse ; no injection since 9.40 P. M. ; very quiet, cold and clammy. 12.02 A. M. Died, in the effort to make the sign of the cross upon her breast.”

March 5, 6.00 A. M. Dr. Scheppers reports the temperature, 90°. At 11.00 A. M. the temperature in the vagina was 94°, verified by Drs. Hay, Scheppers and Paul Simon.

In consequence of the violent opposition of the husband, no autopsy could be made.

March 6th. Through the kindness of Dr. Fernand Henrotin, the efficient County Physician, a Coroner's inquest was ordered in the interests of science, and the brain of the subject sent to Dr. Hay.

NOTES BY DR. HAY.

Thirty-one grains of the calabar bean extract injected. Duration of attack, from 8.00 P. M., March 2, to 12.02 A. M., March 5—52 hours.

No muscular relaxation immediately after death. The first spasm was the beginning of the rigor mortis.

Temperature, high throughout, sank at death, and rose four degrees ten hours after death.

Nerves involved were the motor division of the fifth, the eighth, and the cervico-dorsal portion of the spinal cord.

Respiration very slightly (relatively) accelerated throughout the attack.

Profuse sweat ; no urine.

Cutaneous anæsthesia ; exalted reflex irritability ; brachial plexus involved to the elbow, not below ; roots and trunks, not peripheral branches.

Sciatic plexus, through which the original impression must have been conveyed to the centre, received no morbid impulse (efferent). Brain has how been forty-five days in strong alcohol.

WALTER HAY.

NOTE BY PROF. GUNN.

The limb being put up in pasteboards. On 26th Dr. Gunn saw and re-dressed the fracture, using an outside splint, with a foot-piece, correcting a somewhat imperfect position of foot, and leaving the wound accessible, which latter was dressed loose, compresses saturated with a mild solution of carbolic acid. There was moderate swelling, heat and pain in the parts.

On March 1st, the wound was suppurating fairly, and the patient expressed herself as being entirely comfortable. Her cheerfulness was remarkable, considering the gravity of the injury.

Clinics.

ILLINOIS CHARITABLE EYE AND EAR INFIRMARY.

Clinical Lectures by Dr. E. L. HOLMES.

CONJUNCTIVITIS OF NEW BORN INFANTS. MALIGNANT DISEASES OF THE EYE.

The two cases of conjunctivitis before us to-day present good examples of the results of the affection when neglected. Recalling to mind the nine other patients which you have seen the past few months, you will conclude that an institution like this seldom presents an example of the disease in its primary stage. You have not seen at the clinic an infant which was less than three weeks old. Two have been more than two months old.

You as physicians will be called upon to treat these patients in the early stages of the inflammation. It is your duty to know all that can be known regarding the best method of treatment. You have witnessed most sad examples of neglect; for two patients have been brought here blind, with both corneæ sloughed.

There is scarcely any disease of the eye so easily controlled as this if the proper remedies are early applied. In the outset I must urge you to make a distinction between the treatment required early in the course of the disease, and that which you have witnessed here in the later stages.

I think in nearly all cases the affection is a simple catarrhal inflammation. The conjunctiva in infancy seems especially susceptible to the influences which produce catarrh. Conjunctivitis is very liable at this age to assume a purulent form. Statistics, based on the condition of the mother, as regards the presence of muco-purulent discharge from the vagina during labor, scarcely indicate that such discharges generally produce the conjunctivitis.

The symptoms of the disease vary in degree. There is generally at first a slight redness, with an increase of tears. A very rapid and extensive swelling is apt to follow, with an excessive quantity of thick purulent discharge. The swelling may be so great that it is almost impossible to evert the lids. Occasionally the swollen mucons membrane is found to be covered with a thin pellicle of partially organized lymph. This condition has been termed membranous conjunctivitis. This, however, is far from being diphtheritic inflammation, which is characterized by an exudation of organizable lymph *into* the substance of the conjunctiva, as well as on its surface. This form of diphtheria is most dangerous to the eye, but is fortunately rare in this country.

The treatment of conjunctivitis neonatorum is upon the whole very simple. In all cases it is of the utmost importance to keep the eyes scrupulously clean. To accomplish this requires some skill in turning the lids. Some authors recommend the use of very weak astringent solutions, thrown every hour or even oftener, from a syringe, between the lids. Unless the nurse has experience, there is danger of injuring the eye with the instrument; there is danger also, without care, that some of the discharge may be thrown into the eyes of those holding the patient. I apprehend the great difficulty you will meet in the thinly settled portions of the country will be the want of skilful nurses to follow your directions, if you trust to weak solutions often applied.

In the early stages of the disease, especially when the symptoms are slight, Alum gr. ij—v to the ounce; Zinc Sulph. gr. j—ij; Cupri Sulph. gr. j, are perhaps the astringents most commonly used.

But it not unfrequently happens that in spite of this treatment the inflammation assumes a most violent type. The swelling of the conjunctiva, œdemæ of the lids, and amount of the discharge, may become enormous. The cornea sometimes sloughs in two days, or may remain intact for weeks.

The cases you have seen here have, without exception, been very grave. In three of them the cornea of one eye, in two the corneæ of both eyes, had already been destroyed. In three more the corneæ had become more or less ulcerated. In all, the lids were much swollen, and the conjunctiva roughened to an extreme degree.

You have so frequently witnessed the method of treating these cases in the clinic that I need not dwell upon it now. After exposing the mucous membrane as extensively as possible, I gently soak up the pus and moisture with a soft bit of linen, and apply evenly but carefully over the whole surface a solution of Arg. Nit. $\mathfrak{D}$ j—ij to the ounce of water, with quite a large camel's hair pencil, *well moistened* but not *dripping* with the solution. The "granulations," without exception, you have seen disappear, and the cornea left normally clear, where there were not previously opacities or ulcerations. You have very often expressed surprise that so strong a solution should produce apparently no pain. I can rely on your testimony that, except while the babes' heads were held and the lids opened, the infants have never cried. They have day after day been carried from the clinic room after the treatment without uttering a sign of pain.

In case the hypertrophy of the conjunctiva is excessive to a remarkable degree, as in two cases, I am in the habit, immediately after the cautery, of excising a thin fold the whole length of the lid, as near the duplicature as possible. With such great swelling the piece excised comprises, in reality, but a minute portion of the true tissue. The local bleeding seems to aid in giving relief. Recent authorities recommend in extreme cases the elongation of the palpebral fissure at the external angle. This little operation relieves tension and causes considerable local depletion.

I cannot leave this subject without again impressing upon you most earnestly the importance of not confounding the treatment you have observed at the infirmary with

that which is appropriate for the ordinary cases you will meet as physicians in the first few days of the infant's life. Moreover, remember the rule I hold of utmost importance, that the stronger the solution of nitrate of silver you use, the less of it there should be on the brush with which it is applied. Without these two precautions you are in danger of doing more harm than good.

MALIGNANT DISEASES.

From the number of cancerous growths which you have recently observed here, you must not infer that they always occur so frequently at the clinic. The large number this winter is accidental.

We have two patients which I requested to be at the Infirmary to-day, presenting examples of sarcomatous tumors of the choroid, recurring in the orbit about six months after extirpation of the globe by other surgeons. I must refer you to the last clinic for a somewhat more extended account of choroidal sarcoma. In one case the orbit is completely filled. No surgical interference I believe is warrantable. In the other case, the tumor seems to be attached to the free ends of the muscles in some way, for the round tumor rotates quite freely with the motions of the other eye. Moreover, the tip of the finger can be pressed some distance between the orbit and tumor on every side. I am disposed to advise the removal of the growth. After the operation you perceive that the orbit is left apparently free from diseased tissue. It has been my experience, as, I believe, it is the general experience, that choroidal sarcoma, after the removal of the globe, is not prone to reappear in the orbit, but rather in some internal organ. This tumor is composed of two portions, one a soft black tissue, the other a hard white schirrus. I apprehend this last fact renders the prognosis bad as regards the return in the orbit.

You observe in this other patient, seventy years of age, an example of melanotic tumor of the conjunctiva. He states that for many years there was a small black spot

a few lines from the cornea in the upper and inner quarter of the ocular conjunctiva. About two years ago it began to enlarge, and was finally removed by his physician as a small pedunculated tumor.

We now find, five months after the operation, a tumor about three-eighths of an inch in diameter and somewhat pedunculated. It is not apparently attached to the sclerotic, for it can be freely moved over this membrane. I think the patient's comfort and prospect of prolonged life will be enhanced by the removal of the tumor, with quite an extensive portion of the conjunctiva and subconjunctival tissue.

The contraction produced by the cicatrization of this extensive wound, I have informed the patient, will undoubtedly cause the globe to be drawn permanently upward and inward, and consequently restrict the movements of the eye.

Selections.

(From the Psychological and Medico-Legal Journal.)

THE NEUROTIC ORIGIN OF DISEASE, AND THE ACTION OF REMEDIES ON THE NERVOUS SYSTEM.

By FREDERIC D. LENTE, M.D.,

MEMBER OF THE COUNCIL OF THE NEW YORK NEUROLOGICAL SOCIETY.

Read before the New York Neurological Society, Dec. 7, 1874.

Mr. President and Gentlemen :

Moritz Romberg, Professor of Medicine in the University of Berlin, commences the preface to the first edition of his classical work on "Diseases of the Nervous System" with the following quotation: "I fear it will be a long time before combined efforts will enable a medical author to arrange and accurately describe the diseases of the nervous system. The position we at present occupy is a very inferior one. Such was the opinion of Sir Charles Bell. A decennium has since passed. Many laborers have been at work. We have a rich treasury of

materials, and yet we possess no work on nervous diseases which meets the requirements of science. The blame lies, in a measure, with the distinguished members of our profession who have been deterred by a fear that pathological investigations would fail to cope with the advanced state of physiological inquiry; in others, the fault is to be attributed to that mental indolence which gives the preference to the easy path of tradition, and with foolish skepticism rejects everything that is new. But in no department of pathology has physiology exerted so great an influence, nowhere has free research achieved so glorious a victory over dull, traditional routine, as in the doctrine of nervous diseases."

This was in 1840. Let us see what he says ten years later, for he thus indicates the history of our progress in this direction: "The hope expressed in a former edition has only been partly fulfilled. The majority of students have been attracted by the school which seeks to base the science of medicine exclusively upon pathological anatomy and chemistry. This has given rise to new errors, as the doctrine of the crases most clearly shows. The study of nervous diseases, which some persons have refused to acknowledge as anything but the manifestation of other morbid processes, has been declared a fruitless research, and in some schools has been almost interdicted. If this was the case in the universities, matters were necessarily in a worse condition in daily life. Practitioners chased an illusion and caricature called spinal irritation, with which they satisfied their craving for explanation, and condensed neuro-pathology into a space which could be covered with the tip of the finger. To guard against greater debasement, we must enter again upon the path which the master-mind of Charles Bell, the Harvey of our century, has opened to us."

If this was the case in critical and classical Germany, how much more true was it in the case of other countries. A quarter of a century has rolled by since Romberg thus rather sorrowfully expressed himself. Where are we now? We are certainly not where the wonderful improvements in every other branch of medical science should have placed us. But the past few years have afforded indications of a brighter future. Minds of the highest calibre have been devoting themselves to this study. Monographs, treatises, and periodicals, in different languages and of great value, have appeared, to entice us on, and to light us along this difficult but most inter-

esting path of scientific investigation ; none more interesting, none more practically useful, in the estimation of those most competent to judge, both in this country and in Europe, than that of our countryman, Prof. Hammond. But the teaching of our schools, and our systematic treatises on therapeutics, and our hospital clinics, are far behind our special literature. Their pathological views, as a general rule, show but little change. Mr. Wallace Wood, in a well-written article in the last number of the *Psychological Journal*, indulges in the hope that "the next five years will inaugurate a new system, which will promise as much or more than the brilliant but premature scheme of Gall." I think we may safely predict a future like this for the therapeutics as well as for the physiology of the nervous system.

For some years past my own experience has impressed me with the belief that in most diseases, especially those of an acute character, the morbid impression is first made on the nervous system, either *directly*, as in the case of the mucous membranes, where the peripheral nerves are more accessible to the immediate action of toxic agents ; or *indirectly*, through the medium of the blood. That the remedies, therefore, most likely to exert an *abortive* effect on disease ; or, when that is not attainable, the speediest and happiest relief, are those which are supposed to act especially on the nervous system ; and that our ordinary treatment, by acting in a more indirect, and, therefore, less speedy manner, as well as by disturbing other portions and other organs of the body not involved in the morbid process, is slower, less certain, and more unpleasant in producing their curative effects. I ask your attention, in the first place, to a review of the history and therapeutics of certain diseases not commonly considered neuroses.

And, first, of "malarious" fever, and especially the intermittent form, as this is a disease of paramount importance to very many of us just now ; its unusual prevalence everywhere, but especially in localities commonly considered remarkably exempt, being one of the most remarkable of the inexplicable phenomena characterizing its history in all ages.

I have no theory as to the causation of "malaria" to support. I am as much confounded by its vagaries and seeming inconsistencies as any of its hosts of distinguished investigators. But whatever the cause may be, whether vegeto-aerial or diurnal vicissitudes of tempera-

ture and moisture, or both combined, or gaseous products, or the fungus theory, so ingeniously and learnedly set forth by the late J. K. Mitchell, of Philadelphia, it seems to act primarily on the nervous system, and its morbid energy to be most expended in assaults on that system.* The evidence adduced, both from the arguments and data of those adopting a certain theory of causation, and of those virulently opposing it, alike tends to support this idea. Thus it is admitted, I think, by all, that *repose*, and especially *repose at night*, renders the body most liable to miasmatic influences; while exercise, even in what is supposed to be the hotbed of the poison, is preventive. Every one knows how much more liable we are to "take cold" when sleeping, or even when in a drowsy state, and especially at night. unless the body has an additional covering, and how great a protection exercise is. In both cases the nervous system is more impressible in the one state than in the other. Exercise and occupation, in all *epidemics* of whatever kind, are the great preventives; indolence and fear, causing greater nervous impressibility, are our worst enemies. All army surgeons of large experience can corroborate this.

The sudden onset of the disease, instances of which abound in all their writings, point to the primary affection of the nervous system. "Exposure for a single hour at night," says Mitchell,† sometimes produces an almost immediate attack, sometimes causes a *tendency*, not expressed perhaps for some months." Mungo Park, alluding to African experience, says: "The rain had not continued three minutes before many of the soldiers were affected with vomiting, others fell asleep, and seemed as if intoxicated. *Twelve of the soldiers were ill the next day.*" He felt the same symptoms himself. The following cases, occurring lately at Whitworth Hospital, reported in the Irish Hosp. Gaz. (Boston Med. and Surg. Jour., Nov., 1874), afford an additional illustration: Two hospital nurses, accustomed to hospital sights, odors and sounds, were subjected to a most remarkably fetid odor from the alvine dejection of a dead body. Within ten minutes one fell down, vomited, and became unconscious. After several remedies, an ice-bag to the nape restored

* Virchow has lately said: "Fever consists essentially in elevation of temperature, which must arise in increased tissue-change, and have its immediate cause in *alterations of the nervous system.*"

† "Essays," edited by S. Weir Mitchell.

consciousness in a short time. The other nurse vomited while at the dead woman's bedside, went to her room, and fell down in an unconscious state. Half an hour after the ice-bag was applied to the spine she regained consciousness. Dr. McDowell was of opinion that the medulla oblongata was under the toxic influence of the noxious gases.

As explanatory of the manner in which the fever-poison may thus suddenly influence the system, I adduce a brief account of a very interesting experiment performed a few days ago by Dr. Horatio Wood, of Philadelphia, and of which he was kind enough to give me the particulars: He divided the cord of a dog at the junction of the *medulla* with the *pons varolii*, and, of course, above the vaso-motor centres. Although the lateral sinus was accidentally divided, an accident difficult to avoid in so high a division, and "three-fourths of a pint of blood lost," which should have *reduced* the temperature several degrees, there was a rapid rise to 104° F. (the normal temperature of the animal being about 102°). Here all the controlling influence on the peripheral nerves was lost, just as it is when a powerful toxic impression is made from without. *Cholera Asiatica* not unfrequently produces this sudden overwhelming effect on the nerve-centres, and patients drop suddenly.

Periodicity, or tendency to relapse at certain intervals, the most marked, by many considered the pathognomonic symptom of malaria, also indicates the nervous system as the seat of the disease. This and incubation, with which it is intimately connected, present, perhaps, the most interesting, the most extraordinary and inexplicable phenomena connected with the history of disease. That an exposure should not manifest its effects on the system for a week, or a month, or even many months, and should then, apparently without provocation, induce suddenly the most striking and even alarming symptoms: this phenomenon, this tendency to relapse, is often as annoying and perplexing to the physician as to the patient, and it is practically of the utmost importance that its mystery should be unraveled. The very accuracy as to time points to the nervous system as that portion of the body to which we should direct our investigations; since, if we look *within* the body for the cause, as the slow accumulation or the growth of the *materies morbi* to the point of saturation and explosion, the blood itself,

or any organ except the nerves, ought, it would seem, to give some indication of diseased action. And, on the other hand, if we look *without*, or for external impressions, "exciting causes," the very suddenness of the attack would seem to indicate that it must be through the medium of the same system.* Many cases might be cited in which none but *nervous* manifestations follow exposure to malarious influence—neuralgia, especially supra-orbital, for instance. A man, surrounded by malarious disease in all its forms, recently applied to me with a most atrocious pain over the left eye, coming on every other day at or near a particular hour. He could not credit my assertion that it was "fever and ague," as he had experienced none of the ordinary symptoms whatever. But a few full doses of quinine sent him to his work rejoicing. Periodicity, as has been already remarked, instead of indicating malarious fever, is rather a characteristic of nervous disease. Aitken adduces the periodicity of the phenomena of fever as evidence, not that the fever is of a particular *type*, but that the *nervous system* is influenced; also, the beneficial effect of quinine as corroborative evidence. We observe it markedly in epilepsy. Thus, in a case now under my charge, the paroxysms came on regularly every two weeks, on Thursday, even when the subject was at work, and feeling as well as usual. In another case the attack occurred every four weeks, at night, for a long period. In a third case, under the care of Prof. Hammond, which I saw to-day, and the particulars of which I obtained from the patient's mother, the fits, while the patient was under the influence of the amyl nitrite, taken three times a day, came on as follows: Four days' interval, 3 fits; 4 days' interval, 1 fit; $4\frac{1}{2}$ days, 2 fits; $4\frac{1}{2}$ days, 2 fits; 4 days, 1 fit; $2\frac{1}{2}$ days, 1 fit.

The symptoms following the ingestion of poisons sometimes show marked periodicity. Christison, as quoted by J. K. Mitchell, informs us "that a whole family, consisting of a woman and four children, were attacked by a tertian fever by living for four months on *edible mushrooms*." The husband, who lived on other fare, escaped the symptoms. "Westerhoff observed, in those who

* There is sometimes a marked periodicity in *chorea*, and Dr. Weir Mitchell, who is eliciting some curious and interesting phenomena in his investigations concerning this disease, finds that the attacks *usually* recur in the spring.

were poisoned by mouldy food, an *intermittent somnolency*. M. Gassand saw cases of *ergotism*, where the sensations, either of heat or cold, were *intermittent*." Other writers mention this feature. "The *mental disturbance* intermitted in one case, *inflamed eyes* in another, and all the phenomena in a third." "The *Dic. des Sci. Med.* reports cases of this kind, in which occurred the *most acute pains* which were *intermittent*." In these cases it was also noted that the preparations of *bark* were the most effectual remedies. Dr. Mitchell adduces these facts, among hosts of others, in support of his fungus theory of "malaria." Whether he is right or not, they strongly support the position I am endeavoring to sustain. His essay will well repay perusal. But the most striking instance of marked periodicity occurring from a purely nervous disturbance, happened in a case published by me in the *Amer. Jour. Med. Sci.* for July, 1862. A girl, eleven years of age, and in fair health, not having been subjected to any malarious influence whatever, but of an exceedingly nervous temperament, received a wound of the supra-orbital region, from a fragment of copper-cap, producing amaurosis. The removal of the foreign body almost immediately relieved the defect of vision; but, on the second night after, the eye became much inflamed, deep-seated pain set in, nausea, coldness, and "numbness" of the extremities, and great nervous excitement. Pulse and skin natural; no fever. Anodynes were rejected by the stomach, and the pain was much mitigated by tinct. aconite locally applied. Next morning was pretty comfortable. This was on the 8th of July. On the 10th, another severe attack supervened; the pain was particularly severe in the back of the neck, with inability to flex the neck forward. Skin hot, pulse frequent; vomited. Ordered mild antispasmodics. Fell asleep after one dose, and slept quietly. In the morning quite comfortable; skin pleasant; pulse natural. On the 12th, had a similar attack, except that the skin and pulse were but slightly affected. One dose put her to sleep. She was now ordered a grain of quinine, as a tonic, three times a day. Her next attack, on the 14th, was similar but very slight. She had been ordered five grains quinine on that day as a prophylactic. On the 16th had a violent attack of pain in the eye, but no other symptom. Quinine had been omitted by mistake. The eye looks much worse, and vision is much impaired. July 30th:

Vision perfect. Dec. 14th: Patient has continued well, but has *visus dimidiatus* of the affected eye.

Robert Jackson, who wrote on this subject three-quarters of a century ago, seems to have had a clearer idea of the causes and effects of malaria than any writer of more modern times; and had his knowledge of the anatomy and physiology of the nervous system been equal to that of the present day, might have solved some of the intricate problems which he have perplexed us ever since. All his theories, his experiences, and his observations seem to converge towards the nervous system as the *fons et origo* of the diseased action, and to the necessity of sustaining this, and protecting it from morbid influences, not by any special remedy, but by a combination of judicious management, hygienic and therapeutical, moral and mental, as well as physical. Were it not for fear of rendering myself tedious, I would like to quote a page or two from his work, modestly entitled, "Remarks on the Constitution of the Medical Department of the British Army," published in 1803, which may be found in the library of the New York Hospital.

It may seem to be diverging from our line of investigation to cite *articular rheumatism* as an example of a neurosis. But I ask your attention, for a few minutes, to some well-known facts in its history and treatment, and also to a remarkable memoir of Dr. J. K. Mitchell, to be found in the volume of essays to which allusion has already been made. He attempts to prove rheumatism a neurosis, and refers its phenomena all to a spinal origin. His cases show a striking resemblance, in their articular symptoms, to acute rheumatism; and that these are caused by the spinal disease or injury, he fully demonstrates. But they all seem to be cases of organic disease of the spine, or injury of the *medulla*, except one, which I abridge.

Robert Gordon, well known as the carrier of Poulson's Daily Advertiser, 56 years of age, vigorous constitution and active habits, was the subject of the following attack. Observing a severe pain in his right heel and ankle, immediately followed by redness, heat, and tumefaction, he caused himself to be largely bled, and took salts and magnesia. On the following day the symptoms increased and the ankle and knee of the opposite side becoming affected, he was confined to bed.

On the third day, my first visit was made. Had then a full, strong, frequent pulse, flushed face, dry skin,

whitened tongue, and complained much of the severity of the pain in his legs, and his incapacity to endure the slightest pressure or motion. I directed the application of seventeen cups to the lumbar region, so as to abstract twelve or sixteen ounces of blood. Next morning, I found the pain almost entirely gone; does not complain of moderate pressure, and is able to move his legs without inconvenience. Ordered a draught of salts and magnesia, and a lotion. Third day: Pain in legs scarcely perceptible, but the shoulders, elbows and wrists are beginning to exhibit marks of severe inflammation expressed by pain, tumefaction, heat, and redness. Ordered twelve cups to the cervical spine. Fourth day: Patient sits up; complains of stiffness, but no pain except in one wrist, and that very slight. Epsom salts and magnesia. Fifth day: Finding nothing for which to prescribe, arranged patient's diet, recommended occasional use of aperients, and took leave of the case.

Called on tenth day to inquire into the results, and found there had been no return of the disease. Since that time a severe winter has passed, and he has continued in a good state of health.

The reader will perceive, says the reporter, that the general bleeding, though very copious, proved of no service, and that the large local bleeding in the lumbar region benefited solely that part of the disease which lay at the peripheral extremities of the nerves supplied by the lower end of the spinal marrow. The inflammation in the upper extremities continued afterwards in progress, and was arrested only when cups were applied over the cervical spine. In this connection I refer you to an article on "Neuroses of the Joints," in the Sept. No. of *The Psych. and Med.-Leg. Jour.*, translated from the German of Moritz Meyer. In concluding his essay on rheumatism, Dr. Mitchell adverts to "the close connection between rheumatism and certain diseases of the mucous and fibrous tissues of the eyes, nose, mouth, alimentary canal, bladder, and urethra. In many cases, diarrhoea and dysentery are found to alternate with rheumatism of the extremities, and particularly of the lower limbs; wherever such cases happen, they are always found to yield more readily to spinal treatment than to any other mode of cure, thus affording another proof of the spinal origin of these cases." In a case of severe pruritus, reported in the first number of the *Archives of Dermatology*, by Dr. Beard, for Dr. Kinsman of Ohio, the latter

remarks: "The moment the current (of electricity) is passed along the spine, the pruritus ceases." Dr. Beard also reports a case of herpes zoster frontalis for Dr. Bulkley, cured by galvanism. I have thus also promptly relieved cases of herpes zoster. The spinal origin of many cutaneous affections is now well established, therefore such illustrations need not to be multiplied. With reference, however, to the last named disease, I desire to refer briefly to some remarkable evidences of its purely neurotic character, as well as of other vesicular affections, contained in M. Vulpian's recent French edit. of S. Weir Mitchell's "Lesions of the Nerves," and hence, to the very great importance, in all cases of very obstinate eczematous or bullar diseases, of paying special attention to the influence of the nerve centres, and of possible nerve lesions, as a cause. One case is that in which a ball, traversing the chest, without injury to the skin, except at points of entrance and exit, induced a very painful herpetic eruption. Brown-Sequard mentions a contusion of the brachial nerve causing a herpetic eruption all along its course. Sometimes the eruption is analogous to that of pemphigus. M. Raynaud cites a case in which an injury of the trunk of the "cubital nerve" was followed by an eruption along the whole course of the nerve. "The list of such facts," says Mitchell, "may be extended as far as one may wish." He says that his term "eczematous" to such affections has been sharply criticized by Charcot and Handfield Jones. How little should we regard the trifling eruption, sometimes only lasting a few days, which marks the onset of *herpes zoster*, when the neuralgic symptoms are so much more pronounced and so difficult of cure; sometimes, indeed, under the old methods of treatment, lasting through the remainder of life. Electricity now holds out a prospect of a speedy cure. In fact, this disease is as much out of place in a work on *skin* diseases, as a whale would be in a treatise on fishes.

The very great uncertainty attending the classical treatment of rheumatism through the blood, and the effects of other treatment acting in a totally different manner, do not give much support to the theory of blood-poison. Quinine I have found to act sometimes with great promptitude in aborting the disease when acute, even when there is no evidence of malarious poison. Some rely upon it as a routine treatment. M. See, of La Charite, remarks in a lecture recently delivered there,

that he considers it of great value in acute rheumatism, and always returns to it with benefit after a trial of all other remedies. He says, "Its effect is on the spinal cord, in lowering its irritability, and thus diminishing the sensibility to pain, and lowering reflex excitability, thus reducing the afflux of blood to the inflamed joints." "It may be mentioned," says the *Lancet*, August 8, 1874, "that this mode of treatment is adopted by a large number of the leading physicians of Paris, either alone or with other means, and they all appear to be unanimous in its favor." But to be successful, the drug must be administered with no niggard hand. The blister, or counter-irritant treatment as it is sometimes called, is not seldom promptly successful, if carried out with the firmness which only will insure success. The blisters require to be large, and to be applied freely, and rarely give any annoyance. Patients often beg for their repetition. Ice to the joints is a favorite and successful remedy with some. Esmarch and others used it with great success in the Franco-German war. Dr. Da Costa has recently used the bromides successfully.

The application of cold to the whole surface of the body, or cold bathing, packing or affusion, in cases of extreme danger both in rheumatism and *fevers*, is a still more potent method of treatment, and affords, perhaps, a still stronger evidence of the neurotic character of these diseases. When the temperature in these cases runs up to 109° or 110°, though it may go still higher, it was found that death was the almost inevitable result, until after the adoption of a certain bold treatment, which consists in a rapid reduction of the abnormal heat by the application of cold to the whole surface.* It appears to be generally understood that the good effect is due to the direct abstraction of heat. But it is doubtful if this has much to do with it, if it has anything at all. Frequently the internal temperature continues to fall for some time after the patient has been put into bed and covered up, to such an extent as to threaten serious consequences at times. Now, the mere abstraction of heat by direct action of the cold must cease the moment the cold is withdrawn from the surface, and we must look for some explanation of the continued fall of temperature. Then there are cases in the so-called hysterical

* The treatment is not new as regards fevers, but was proposed and largely practiced by Currie, but fell into comparative disuse.

conditions of females, where the surface is habitually cold and clammy, and yet the best remedy is the cold shower bath. I am happy to be able to adduce the experience of so able and careful an observer as Robert Jackson, who speaks, as regards fevers, from an experience of the largest kind. "It is possible," he says, (*opus cit.*), "that excess of heat may exist, and it actually does exist, without *superficial excitability*, that is, without a due share of sensibility of surface (*italics mine*) both in the early period and in the later stages of fever. Such condition of fever is common in spring, common in Europeans soon after their arrival in tropical climates, both in the commencement and in the after-period of the disease, either as connected with plethora, or with internal congestion. The heat is then often ardent—particularly on the trunk of the body. A thermometer, in this case, is a fallacious guide. It indicates a high temperature, but experience proves that cold bathing does no good; it probably does harm in the cases connected with internal congestion. To trials, in such cases, it is believed the credit of the remedy has been sacrificed in the fever of the West Indies, and probably in that of America." That is to say, in modern phraseology, the cutaneous nerves must be in such a state as to receive and convey an impression to the nervous centres, thence to be transmitted to the vaso-motor nerves of the internal organs, contracting their minute vessels, diminishing hyperæmia, arresting, for the time at least, destructive metamorphosis of tissue, and over-production of animal heat.*

As a remarkable illustration of the powerful and sometimes destructive effect of applications to the surface, when too extensive, too severe, or too prolonged, I remind you of the results which followed the old experiment of varnishing animals, and the death of the child coated with gold leaf, to represent the golden age, in a procession during the reign of Louis XIV. The cause of death in these cases has been variously attributed to the great fall of temperature which ensues, to the complete arrest of perspiration, to asphyxia, etc. But lately, Dr. Feinberg has been reinvestigating the subject by

* It is not contended that this is the only mode by which the impression may act on the nervous centres. In fact, the *inhibitory* action developed in those centres, as will be shown by examples, may be still more powerful, even to the production of fatal consequences.

further experiments, and has come to the conclusion that it is "from paralysis of the *vaso-motor nerves* all over the body, producing excessive dilatation of the vessels, and extensive extravasations. In the spinal cord, especially, was there congestion and extravasation." There was decided sinking of the temperature. He attributes the vaso-motor effect to intense irritation of the sensory nerves of the skin. His specimens were examined by the celebrated histologist, Frey, and his facts confirmed by him.

The coincidence of *excessive dilatation* of the capillaries of the viscera, with marked *reduction* of temperature, may seem to conflict with the views frequently expressed or implied in this paper, as to the increase or diminution of temperature from *vasal dilatation* or *contraction* respectively, though we have been careful not to attribute it exclusively to this. But we must not forget that, in Feinberg's experiments, this vaso-motor paralysis is carried to an *extreme* degree. In like manner, though the physiological effect of some of the drugs, to which your attention will presently be asked, is to *contract* the vessels, they are found, if pushed to an extreme or fatal degree, to do just the opposite; and this ought always to be borne in mind in estimating the peculiar properties and therapeutic value of these powerful agents. So here, the immense reduction of the intra-vascular pressure, producing sinking of the heart's action, and almost complete arrest of the circulation in the capillaries, would naturally induce a fall of temperature; whereas the varnishing of a smaller portion of the surface would have doubtless produced quite a different condition of the visceral vessels.

To return to a consideration of the *joint* affections of rheumatism, I desire to remind you of the many instances where pain and inflammation of the larger joints supervene on injuries, and suppurative diseases of the extremities, and on other conditions giving rise to what is usually called septicæmia or pyæmia, supposed to be due to blood-poisoning, or to a low grade of inflammation extending along the veins and absorbents. A patient of mine, a lady eighty-three years old, recently died of senile gangrene of the right foot, advancing slowly at first, but finally running up the leg with great rapidity, attended by no chill or febrile reaction, but affecting the sensorium profoundly; simultaneously was developed a "rheumatic" inflammation of both wrists, and for some

days the only pain which she appeared to suffer was due to this. Here there was no evidence whatever of blood-poisoning. In view of this, and many similar facts, it would be well to review our ideas of the causation of these intercurrent phenomena, and to remember the connection which may exist between what has been said about neuralgia and the spinal origin of rheumatism, and the fact that in the cases just mentioned, those of supposed septicæmia, quinine is now considered the sheet-anchor. I am told that Sir William Gull, twenty years ago, claimed a spinal origin for rheumatism, and thought the idea original, but was preceded a quarter of a century by our distinguished countryman.

We are, of course, not able to experiment on the human body as we do on animals, in order to solve physiological problems, but accident frequently comes to our aid; and the evils of war are often turned to good account. I desire to call your attention to a few instances of this kind, which serve to elucidate the influence of the nervous system in the production and cure of disease.

The following case fell under my notice while on a visit to Saratoga Springs, in the autumn of this year, and, I think, demonstrates that which had only been previously done by experiments on animals, what Austin Flint, in his "Physiology," calls the starting-point of our definite knowledge of the functions of the sympathetic nervous system—"that the influence of the sympathetic nerve in the neck was propagated from below upward toward the head, and not from the brain downward." This was carried further by Brown-Sequard in 1852, whose experiments led to the discovery of the vaso-motor nerves.

Case.—Theophilus S., stair builder, fell, on June 22d, 1874, twenty-five feet; the spinal column, at the base of the neck, and from that to the right shoulder, striking a hand-rail. The blow was thus received rather on the right side of the spine than directly upon it. Had always been well, and had never been injured until the Franco-German war, when he was stunned while in charge of an ambulance by the explosion of a shell. He soon recovered, and is not aware that any ill consequences followed. Last winter he was greatly chilled by a somewhat prolonged exposure, since which he has not been quite so well as usual. After his fall, he was unconscious for an hour. Dr. Whiting saw him at once. There was no indication of any injury to the head. On returning to consciousness he complained of a most intense pain in

the occipital region, low down ; the least movement of his body gave him intense pain at *seat of injury*, and nowhere else. He also felt as if the whole right side, the arm, leg, etc., "were dead." No uneasy sensation in left side. His vision was also impaired, and he had "noises in his ears." He required a hypodermic dose of morphine for his headache. Was constipated for several days, and had retention of urine, lasting three days, and then passed his water, and continued to do so. For five days could not move his right lower extremity at all. Could move his fingers, but any attempt at movement of the arm produced violent pain in the spine. Motion and sensation in the limbs returned very gradually. For a while the headache required anodynes, and gradually subsided.

Five weeks after the accident he felt so much better, that, with the aid of a stick and limping, he walked about a quarter of a mile to the doctor's office. A day or two after, he was much worse, and was put to bed again. Severe gastric and abdominal symptoms set in. After eating one or two mouthfuls of food, there was so sudden and enormous an accumulation of gas that he felt as if he would burst ; had other symptoms of indigestion, and an obstinate diarrhœa set in. Headache also returned, and required the hypodermic injections, which acted very slowly. About eight weeks after the first relapse he felt so much improved that he went to work ; worked only two hours and a half, and with great difficulty. Pain commenced in his shoulder and back, then his fingers stiffened so that he could not hold his hammer ; headache set in, and his old diarrhœa ; he could scarcely get home on account of the latter, stopping three times to relieve himself. He was better, after a rest in bed for some days. It was soon after this, when he was able to walk about a little, that he came under my notice in Dr. Whiting's office. His prominent symptoms were as follows : vision imperfect ; since his first relapse sees everything sometimes blue, sometimes red ; and, on lying down, sees things "quivering," and in this position his headache, now very moderate, is decidedly increased ; sleeps badly, was somewhat relieved by moderate doses of bromide of potassium. Sleeps pretty well when *sitting* in an easy-chair, and better in the daytime. His diarrhœa is uncontrollable by opiates and astringents, except for a short time. When his bowels are loose, his micturition is painful. The *sudden* puffing up of his stomach, on taking

a few morsels of food, was a marked and intractable symptom for some time, but he is now, in a great measure, relieved. Another very curious symptom has lately appeared; his evacuations are attended by an intense burning sensation in the bowels and around the anus, "*as if sprinkled with red pepper.*"

I have not the space to comment on this remarkable case. I showed him to Dr. Hammond, and Dr. Cross also saw him. They could not make up their minds that all his cerebral symptoms were due to the spinal injury. Perhaps they were not. But the abdominal symptoms certainly were; and, in connection with this, and with the remarks on the spinal origin of rheumatism, and the nervous origin of fever, I adduce other cases of abdominal disease caused by and causing affections of the nervous system, and relieved by remedies addressed to that system.*

A remarkable case of convulsions and coma, caused by a slight abdominal irritation, is related in a letter from Paris, from the parent of the patient, and published in the Boston Med. and Surg. Jour., for Oct. 29, 1874: "The child while at dinner, and in perfect health, was suddenly seized with a convulsion of a most violent and alarming nature, becoming rigid, eyes fixed, pupils much dilated, teeth clenched, accompanied by the most distressing gasping for breath, and complete unconsciousness. The physicians summoned tried the warm bath, artificial respiration, etc.; the *hot* bath, dashing cold water. One proposed a hypodermic injection of morphia, which seemed to relieve the violence of the spasms. Sir John Rose Cormack arriving, suggested another hypodermic injection, and in case of failure, *tracheotomy*. The injection fortunately succeeded; he became narcotized, after having been in violent convulsions for two hours. The diagnosis was *worms*. The following day he awoke quite relieved. He subsequently passed two or three worms.†

* See case, very similar, in many respects, to that of Shires, in London Practitioner for March, 1874, extracted from Deutsch Archiv für Klin. Med 1873, xi. The very first application of the galvanic current to the left cervical sympathetic relieved the violent cerebral symptoms materially.

† See a remarkably interesting case of most serious cerebral symptoms, caused by constipation, in Brit. Med. Jour., August 8, 1874; Med. News and Lib., Oct., 1874. Since the above account was written, I have met with a full and extremely interesting account of its history, in the London Medical Times and Gazette, from the pen of Sir John himself. This I propose to notice more fully in connection with a case treated by me within the past week.

I had a case very similar to this, in a child nine years old; the coma was complete for some hours, and death seemed impending. I also diagnosed correctly, as the event proved. There is really nothing remarkable about these cases, except as regards the age. Scores of *infants* in our large cities die every summer from convulsions induced by abdominal irritation and reflex action, many of whom might be saved by a better appreciation of neuropathology, but especially by a more liberal use of neurotics, and by bolder doses of *opium*, with the temporary aid afforded by chloroform inhalation. Reflex meningeal irritation is still constantly mistaken for inflammation, and the traditional horror of opium in meningeal and cerebral diseases of infants still stays the hand of the physician, and consigns many a curable patient to an early and untimely grave. In an article on the treatment of vomiting by electricity, published in the second number of Beard's "Archives of Neurology and Electrology," will be found three cases there related by me, remarkably illustrating the nervous, or, if you choose, malarious origin of diarrhœa, and its prompt arrest by electricity, after total failure of all other ordinary remedies—the cases of Mrs. L., Mrs. M. C., and the girl A. D. In the first, however, the extract of ergot, given for a different purpose in large doses, by hypodermic injection, was largely instrumental in the cure. And here I will supply an important omission in the case of Theophilus S. I suggested to Dr. Whiting the use of ergot and bromide of potassium for the diarrhœa; and doses of half a drachm (℥. ex.) increased to a drachm of the former, with half-drachm doses of the latter, relieved him completely in one week. The fluid extract of *Eucalyptus Globulus* (which, however, differs from ergot in possessing astringent properties) has a similar effect to ergot in these cases, an effect not due to its astringent action, as proved by the previous failure of other more active remedies of this class. A combination of the two is excellent; and the powerful tonic property of the *eucalyptus* aids essentially. Prof. Hammond has found this combination admirable in a similar condition of the mucous membrane of the bladder, arising from an atonic condition of its muscles, as well as the muscular coats of its vessels, and constituting catarrh of the bladder, with an alkaline condition of the urine.

Dr. Austin Flint, Jr., in his recent work on the "Physiology of the Nervous System," publishes the results of the experiments of Dr. Moreau, in Paris, in

1860, which are strikingly illustrative of the preceding suggestions and cases. "In those experiments the abdomen was opened in a fasting animal, and three loops of intestine, from four to eight inches in length, were isolated by two ligatures. All of the nerves passing to the middle loop were divided, taking care to avoid the blood-vessels. The intestines were then replaced, and the wound in the abdomen closed with sutures. The next day the animal was killed. The two loops, with the nerves intact, were found empty, as is normal in fasting animals, and the mucous membrane was dry; but the loop, with the nerves divided, was found filled with a clear, alkaline liquid, colorless, and slightly opaline." This experiment has an important bearing on the pathology of *cholera Asiatica*, the *profuse watery diarrhœa*, without abdominal pain, indicating mere want of innervation, rather than an attempt to eliminate a poison, and the subsequent cramps in the voluntary muscles, pointing very decidedly to the nervous system as that mainly, if not exclusively, affected by the poison, and to the necessity for a treatment which may present, at least, more uniformity of action than any which has heretofore been devised. For the history of this destructive disease, as far as *treatment* is concerned, is far from creditable to us as a profession; those methods, based on totally different pathological views, showing about an equal amount of mortality.

The peculiar effect of our *cathartics*, especially when they are given for their so-called *derivative* action, can only be explained by their reflux influence on the brain, and its vaso-motor vessels, rather than by unloading the *abdominal vessels*, which is also a means, but a more tardy and less efficient, since the impression felt in the brain is almost instantaneous. This is felt sometimes even after an ordinary evacuation, or even after the passage of gas. In the same manner a sharp pain in the cardiac region is instantly relieved by the sudden passage of gas from one portion of the intestines to another, the pressure on certain nerves being thus removed. All these apparently trifling phenomena, unimportant individually, are valuable when studied together.

Returning to the consideration of accidents and the influence of nervous shock in the production and cure of nervous affections, I merely refer to the two following cases published by me while house-surgeon to the New York Hospital. A negro with delirium tremens, upon

whom I had vainly exhausted all my remedies, broke from his attendant and sprang from the third-story window, falling on the stone stoop below, and striking on one buttock. He was carried to his ward, was found to have sustained no damage save a severe bruise at the seat of injury, and in a state of perfect sanity. He was discharged cured in a few days, when able to walk. At about the same time Dr. Lyman Stone, then house-physician of Bellevue Hospital, published a similar case. The patient was wildly delirious from typhus fever, and the case concluded with this quaint sentence: "He broke from the orderly, jumped out of the third-story window to the area below, and had a rapid recovery." A case somewhat similar was related to me a few days ago, by an intelligent lady patient. A friend of hers, sojourning at Litchfield, Connecticut, during the past spring and summer, accidentally fractured her forearm. She was of a nervous temperament, and the shock was very considerable. The case did well, but the point is this: For forty years regularly she had had a recurrence of "hay-asthma" at a particular date; but this summer has passed with no symptom of it. The case is particularly interesting in view of Dr. Beard's recent researches into the *nervous origin* of this disease, and the means suggested for its cure, of the efficacy of which he is very sanguine. See his paper recently read before the "Public Health Association." Now, I do not recommend or propose to employ such radical means of cure; but, in connection with the pathological questions involved in this essay, and the effects of the neurotics already alluded to, and those to be considered, they are suggestive.

In connection with the preceding reflections and hints—for I cannot call them arguments—obscure and uncertain though they may be at present, let us briefly review the physiological effects of some of the more important *remedies*, which, with the aid of a larger experience and a more extended series of experiments on living animals, may enable us to take advantage of what, it is hoped, may prove better views of pathology.

Among the more important of these presumed to act specially on the nervous system, may be included *atropia*, *ergot*, *strychnine*, *opium*, *conium*, *physostigma* or *eserine*, *iodine*, *calomel*, (in *sedative* doses), *quinine*, *phosphorus*, *amyl nitrite*, the *bromides*, the *anæsthetics* (by inhalation), *digitalis*, *electricity*. Many others might

with propriety be added, but these have been most thoroughly studied as yet. *Guarana*, or *Paullinia sorbilis*, ought not to go unnoticed, though we know nothing of its precise physiological action; but the prompt relief which it affords in various headaches, including *migraine*, and the safety with which it may be administered in almost any dose, renders it, like the bromides, doubly valuable.

Electricity is placed last, not because it is the least in value, but because it is undergoing a thorough investigation, and its status is very unsettled. Judging from the power which it is rapidly developing over a great variety of diseases under the close study and thorough experimentation of many of the ablest men in the profession, it bids fair to stand high in the list of this class of remedies, and perhaps second to none in the *Materia Medica*. As an *analgesic*, and even *hypnotic*, it may, in a great variety of cases, aspire to a rivalry with opium—the *magnum donum Dei*—in some cases being far superior to it. If time will permit, I hope to adduce numerous cases in proof of this assertion, some of them very striking, a few of them I think *unique*, many of them not involving anything novel or strange to those of you who are in the daily habit of employing this agent in its several forms largely in your practice. But, as yet, comparatively few even of those considered the best therapeutists of the profession, make any considerable or systematic use of electricity, except in a very contracted range of diseases, and are extremely skeptical as to the reports from specialists, of its wonderful influence over symptoms and diseases to which it had heretofore been considered entirely inapplicable. It is no wonder that the extraordinary assertions of Remak, Duchenne, and lately Arthius, in Europe—to say nothing of their distinguished followers in our own country—should be received with discredit, and even with derision; it has invariably been the fate of all remarkable discoveries in our science. But an honest and careful imitation of their methods, uninfluenced by blinding prejudice, will soon convince the most skeptical that enthusiasm has but little colored or warped their reports; unless, indeed, the enthusiasm engendered by the almost magical results of his first essays should warp his own judgment. *Static* electricity has fallen into such complete disuse of late, and the little book lately published by Arthius is so peculiar and enthusiastic in its style, and so sneeringly alluded

to by its reviewer in the last number of Hays' Journal, that I am induced to put on record here probably the first authenticated case of its curative effect in this country, and the first instance where it was used for *myalgia*, a disease for which we now know electricity is a specific. The operator was my colleague in the Council of the University of New York, the well-known divine, Mancius Hutton, D.D., who will, I hope, pardon me for using his name in this connection. He was experimenting fifty years ago with a cylinder machine made by himself, when his father happened to be suffering from an obstinate attack of myalgia of the muscles of the shoulder and back; he placed him on an insulated stool, also made for the occasion, charged him with electricity from his machine, and then drew sparks from all the affected parts. He was promptly and permanently relieved.

The physiological action of *ergot* is now pretty well established. It contracts the minute vessels, both arterial and venous. It also acts on the involuntary muscles themselves, as, for instance, the heart and uterus. It acts both on the vessels of the medulla spinalis and the brain and its membranes; this, and the fact of its being perfectly innocuous, even in very large doses, renders it, like the bromides, an extremely valuable medicine. The two together, and aided sometimes by belladonna, which has on the vessels a similar action, will probably prove one of our most reliable means of combating both acute and chronic affections of the encephalon. In spinal congestion, Prof. Hammond's very large experience has taught him that, when perseveringly used in large doses, it is a most valuable resource. Much has lately been written about its influence on fibrous tumors, especially of the uterus. I can confirm the reports of its great value in these cases. The tumors, if large, rapidly diminish, and their more serious complications, as hæmorrhage, are promptly relieved. Hypodermic injection is the most efficacious means. Many seem to have been deterred, after some trials, by the occurrence of inflammation, abscess, etc., and have tried suppositories of Squibb's solid extract, which succeeds, but not so well. Dr. Murdock and I have used the injections freely in one case (alluded to in my paper on vomiting, and on the hypodermic treatment of intermittent fever); 167 injections of Squibb's fluid extract were used, in many instances repeated in the same locality, after the resulting indurations had subsided, and only once with any untoward

result. I attribute the effect on these fibroids to *starving them out*, by its constricting the vessels. This explains why it succeeds better on large tumors which are less nourished. When the body is poorly nourished, heterologous or adventitious growths are the first to be absorbed, and some of those tumors have been cured by the starvation system. Langenbeck thinks he has cured aneurisms of large arteries; indeed German surgeons have published several cases of cure, but the experiment does not seem to have been followed up, and it seems difficult to account for its effect on such large sacs or their contents. Lately it has been injected in the cellular tissue, over large varices, with a promptly curative effect; here its action is easily comprehended.

Drasche, of Vienna, has lately been credited with being the first to recommend and to use hypodermic injections of ergot for hæmoptysis and other hæmorrhages. But in October, 1869 (see report in Medical Record for November), and before the publication here of Langenbeck's trials, I used the undiluted fluid extract of ergot in a desperate case of post-partum hæmorrhage (20 to 30 minims), and the patient recovered. Its beneficial effects on certain forms of diarrhœa have already been alluded to, and its successful employment by one German and several French physicians in severe diarrhœa and dysentery, is alluded to by Wood in his recently-published treatise (op. cit.). It is well to combine it with *eucalyptus*, which, there is good reason to believe, acts similarly on the capillaries.

Dr. Crichton Browne, in the London Practitioner, for June, 1871, and E. Churchill Fox, of the West Riding Asylum, in West Riding Asylum Reports for 1871, give clinical evidence of the excellent effects of ergot in mania. The latter makes the following important statement: "It has sometimes occurred to me that the bromide of potassium, the value of which I would be far from depreciating, has a tendency in some cases to aggravate the attacks of epileptic mania. It seems to relieve the muscular at the expense of the mental element in the epileptic condition. The fits are reduced in number and severity, but the paroxysms of mental disturbance are intensified and prolonged. Under such circumstances ergot becomes of the highest service; its use, alternated with that of the bromide of potassium, places the two phases of the malady under equal and powerful control." I have only space to say a word about the *dose* of this valuable drug.

If it is used timidly or sparingly, or with a dread of the horrible consequences of *ergotism*, which has been too long the traditional raw-head and bloody-bones of routine practitioners and authors, it would be better to try some other drug. Less than *one drachm* of a good fluid extract (ergotine, so called, has no existence), three times a day, for an adult, ought to be the minimum dose, though we may *commence* with half a drachm merely out of respect for the stomach. In some cases of a very dangerous or obstinate character, the dose may be larger; and if for acute disease, or if not to be continued very long, very much larger. "In one of Wright's experiments," says Wood, "an amount equal to two drachms for every pound weight of the dog, failed to kill." Horatio Wood says, "Although I have given ergot (fluid ext.) in ounce doses, I have never seen it cause any distinct symptoms." He alludes, however, to two cases, in which poisoning did occur; but the amount taken was not mentioned by the reporters. I cannot explain the statements of the numerous writers, who, for hundreds of years, have given accounts of fatal epidemics of ergotism, except by referring you to the testimony of Trousseau and Pidoux,* who "assert that these epidemics are not dependent on any specific action of ergot, but are either epidemics of blood diseases, or simply the results of improper and insufficient food—merely the outcomes of poverty, wretchedness, and famine." I have not referred to all the diseases for which this remedy has lately been successfully tried, but have devoted to it more space than I should have done, had not my friend Dr. J. C. Peters passed it over in his valuable paper of last month, on the vegetable neurotics.

I ask your attention next to *digitalis*, both because of its great value, and because it affords another still more striking instance of the evil of traditional evidence, or rather of a blind reliance on it. Up to a quite recent period in the history of medicine it was looked upon as, *par excellence*, a depressing remedy, especially on the circulation; and I imagine that but comparatively few physicians now, taking the whole country, have any definite idea of the value of this remedy as a *heart tonic*, and of the great range of its applicability in disease. The error has arisen, probably, as errors concerning the action of remedies have too often arisen, from noting the effects of *toxic* doses on animals. In *such doses* "it lowers

* Horatio Wood's *Mat. Med. and Therapeutics*, p. 469.

reflex activity, and induces lassitude, prostration, muscular tremblings, and sometimes convulsions." Its powerfully *tonic action* on the heart has been demonstrated by all the numerous experimenters on its action on animals. It produces such an energetic action on the heart, if pushed too far, "that the ventricles become white, as the last drop of blood is squeezed out of them." Finally, if pushed to its poisonous effect, the heart is arrested in systole (Wood). In the case of a lady at West Point, a patient of Dr. Peaslee's, who had had a peculiar affection of the heart for some years, the pulsations being above a hundred, and very feeble, becoming extremely rapid, feeble, and irregular on walking across the floor, and who had been told, as she said, that there was no remedy for it, I prescribed tincture of digitalis in only ten-minim doses three times a day; within forty-eight hours, if my memory serves me, the pulsations of the heart and the throbbing of the vessels of the head and neck became alarming, so that in my absence she sent for Prof. Dunster, then the assistant surgeon of the post. He stopped the remedy, finding her pulse regular, full, and strong, and not abnormal in frequency. This was the end of her heart-trouble, for, I think, a year, when a similar attack, but much milder, was relieved by her physician at home, to whom she related the effect of the remedy in her previous attack. This is a typical, but not an uncommon case. It is not only in such marked cardiac cases that digitalis exhibits its great value as a neurotic. In all cases of debility requiring vegetable or mineral tonics, and when the heart's action is disproportionately weak, as is frequently the case, I employ it as an auxiliary, and with prompt and decided effect; also in combination with these remedies, or with astringents in passive hæmorrhages, especially in some obstinate menorrhagias. It has been shown, by direct experiments on frogs and rabbits, that it rigorously contracts the capillaries like ergot and belladonna (Boldt and Ackermann, quoted by H. Wood). Where an indication for the remedy seems to exist *from the weak or irregular action* of the heart, and a *concentric hypertrophy* of the latter is made out or suspected, the latter being usually considered a strong contraindication, it is well to give it, but to do so cautiously; and as the remedy is pretty uniform, and in my experience, and contrary to tradition, also *non-cumulative* in its action, it is perfectly safe; and I have seen it very efficacious in those very cases. In sudden cases of

prostration from disease, or poisoning by such agents as paralyze the heart, as aconite or veratria, the remedy may be given by hypodermic injection. In Bellevue Hospital I am told it has been used thus with prompt effect in sudden and dangerous suppression of urine, though its action on the kidneys is probably secondary to that on the heart and arteries, and not as a *diuretic*. It is well worth trying, commencing with ten minims. In severe cases of cardiac irregularity and frequent pulse, when the patient is not confined to the recumbent posture by necessity, it is better to enjoin it while the remedy is being tested, as it not only produces its effect by *direct action* on the muscular fibre, increasing its power, but by an inhibitory action on its nerves, allaying irritability and irregularity. It passes my comprehension how so advanced a man as Prof. See, of La Charite, can declare that digitalis is a cardiac depressor or paralyzer, and that Liebermeister and Headland should substantially sustain this opinion. This drug will be again alluded to under the head of paralysis of the heart.

Few, it is presumed, will be willing to admit *calomel* into the list of neurotics, or of remedies acting directly on the nervous system, and I can only refer you to actual clinical experience in my own practice and in that of others which seems to me to place it beyond doubt. I have not time to give recent cases, but I refer to numbers already published by me in the New York Journal of Medicine, March, 1856, in an article on Dysentery, and in the same journal for March, 1870, in a paper read before the Dutchess County Medical Society on the "Sedative Action of Calomel." As this peculiar and important action of calomel is scarcely at all comprehended at the present day, not even alluded to by Waring, Phillips, and Sidney Ringer, in their late editions, though well known to James Johnson, Annesley, and many other distinguished topical writers of their period, as well as to Hamilton of Edinburgh; as it is entirely discredited by Headland, and not even referred to by H. Wood in his able and very valuable, though, in some respects, rather incomplete treatise so often referred to in this paper, I feel constrained to devote more space to its notice than I should otherwise have done.* "Probably no single dose," says Wood, "is capable, in the average man, of acting as a virulent

* Sir Thomas Watson says he has seen the good effect of the sedative doses, but he has apparently never used them.

poison, owing to but a limited portion of it being absorbed, the remainder being swept out of the alimentary canal by the diarrhoea produced." If Dr. Wood would experiment with this, as he has so carefully done with so many other not so valuable drugs, and uninfluenced by tradition and prejudice, he would find that it neither passes out of the bowels quietly, "like so much chalk," as Headland says, nor is swept out by diarrhoea; for, when a *genuine sedative dose* is given to a sick person, for it is no test to give it to a healthy animal, as the Edinburgh Committee did, say not less than xx to xxx grains, it will, as I have shown by numerous published cases (op. cit.), sometimes produce constipation, not unfrequently a complete arrest of peristaltic action in dysentery and cholera for twelve hours; and even when it acts as a cathartic it does so not very promptly, and generally in the mildest manner; and ptyalism is almost never induced. It is true that if an overdose is given it does pass quietly out of the bowels without injury, as Headland says, but he is in error when he says that only the *ordinary* cathartic dose takes effect, say 5 or 10 grains. For if in the cases above alluded to such a dose be given, it will usually, probably always, produce irritative and aggravating effects, whereas the full dose acts in a manner precisely the reverse. There is, probably, as Wood states, no such thing as a poisonous dose of the drug, but I have never had occasion to go further than 90 grains in one night to a child with membranous croup, and I have always seen either good effects or no effect at all from such quantity. I refer to an interesting case of Hamilton's, in the person of a child of the celebrated Sidney Smith, published in his biography. The country practitioner, frightened at the doses recommended by Hamilton, abandoned the case, and the father carried out the treatment and saved his son.

That calomel has its sedative influence by direct action on the peripheral nerves, and so on the nerve-centres, and that, when more is administered than is required for this effect, the surplus is not absorbed, and does not affect the blood, is not only sufficiently proved, as far as clinical evidence can prove it, by the large number of recorded cases of my own and of many other observers in this city, but especially in the Western and South-western States, but has remarkable corroborative evidence in the similar action of a remedy taken from the *vegetable* kingdom. Although one drop of croton-oil is a dose, and two

or three, which are very rarely given, will often produce alarming diarrhoea and prostration, a drachm or more has been accidentally swallowed without serious results. "Cowan," says Wood (op. cit.), "has recorded the case of a child, four years old, who recovered in two days, from a teaspoonful of croton-oil taken on a full stomach." Adams, another case of recovery from a drachm taken by injection. Wood himself has only been able to discover two fatal cases from large doses. In one, the dose was two and a-half drachms, and the patient a man already worn out by a four weeks' illness from typhoid fever. In the other, recorded by Giacomini (Stille's Therap.), "twenty-four grains" proved fatal, not by purgation, there having been only four passages, but apparently by nervous shock, the symptoms being those of "general collapse, the patient preserving consciousness to the last." When injected into the veins, the weight of evidence from experimenters on animals is to the effect that it does *not* thus produce its characteristic effects (Hertwig and Bucheim). In certain conditions of the peripheral nerves of the intestines, as where they are poisoned by lead (Colica Pictonum), and obstinate constipation results, the ordinary dose of the oil has no effect, I have repeated the dose, one or two drops, every hour, until ten or fifteen drops were taken, without eliciting any response, and with no evidence of absorption into the blood. This peculiar action of lead on the intestinal nerves, renders its preparations a valuable remedy in some forms of diarrhoea, but the doses must be large enough, and they are seldom so, to produce this sedative effect. The fatal dose, in the latest work on Mat. Med., is one to two ounces (H. Wood). The danger of affecting the system seriously, is in giving small doses continuously—the almost infinitesimal doses which painters, plumbers, etc., sometimes get, producing all the serious phenomena of chronic lead-poisoning. So it is with calomel; there is absolutely no danger from a teaspoonful, while a few grains, given in minute doses, may produce the most serious consequences—in the one case, the medicine acting through the *nerves*, in the other, through the blood. This peculiar immunity from large doses of drugs, while small or moderate doses produce such serious consequences, deserves more investigation than it has received. Take *arsenic* for instance, reputed one of our most active poisons: while unpleasant consequences arise from frac-

tions of a grain, and death. it is said, from two or three grains, there are instances on record where several drachms, in one case two ounces, were taken, and the patients recovered; in one case a very large quantity was taken in lumps, and sixteen hours elapsed before remedies were applied. It has been said that these large doses cause prompt emesis, and thus a large portion is rejected; and, in such cases as the last, that it was in a very insoluble form. But I have, within a few days, seen a remarkable case where none of these theories could be applied. I was invited by Dr. D. I. Bruner, of Columbia, Pa., to see the patient, and from the two I obtained a complete history.

Mr. W. B., aged 55, a healthy man, but rather addicted to the favorite German drink of that region, had been meditating suicide, as he informed me, for three weeks; when, on the 19th Sept., 1874, having warmed up his courage by some five or six glasses of lager, he obtained an ounce of arsenious acid, in powder, from the principal druggist, under a specious pretext, and took full three-fourths of it, six drachms. He had just before taken some food. Supposing that death would come soon, he laid himself down in a proper position, informed his family of what he had done, and bade them good-by. His wife summoned Dr. B. at once. The doctor found him comfortable, but endeavored to persuade him to take an emetic, but he positively refused to have anything done. The doctor remained with him an hour and a half, and then left, supposing there must be some deception; an hour after, however, he was again hurriedly called, and found the man in great agony, vomiting, purging, and complaining bitterly of the usual pains and burning sensations in stomach and bowels. He had taken the ipecac left by Dr. B. It was not until *five hours* after the ingestion of the poison that Dr. B. got the usual antidote, which he gave him in large quantity as fast as he rejected it. None of the arsenic was observed in the vomited matters; but the doctor did not see the first. He gradually recovered from the pains, and fourteen hours after the dose was taken he fell into a quiet sleep, with a natural pulse, easy respiration, normal temperature (by the thermometer), and rested four hours, and awoke free from pain or burning, and has had none since. In fact, with the exception of the first few hours, he has had not one of the many characteristic symptoms of acute arsenic poisoning, and a hy-

podermic injection of morphine would, in all probability, have promptly relieved those from which he did suffer. The nausea and vomiting continued about four days, but during that time he took and relished all the food he was allowed to have, and his appetite and digestion have been unusually good up to the present time, seven or eight weeks. I said there were no characteristic phenomena of acute poisoning. He did have marked injection of the conjunctivæ, and a slight feeling of constriction of the pharynx for a few days. On the seventh day, symptoms of chronic poisoning set in, with numbness and pricking, closely followed by weakness of the feet first, then the hands, and in the course of a week increased to the degree in which they exist now. Nov. 12th, he can close his fingers on my hand, but cannot grasp. He cannot stir foot or toes; can use the muscles of the thigh. The feet are very slightly œdematous, but only from letting them hang down most of the day. The functions of all his viscera appear to be perfect; his tongue is clean. His pulse, sitting up, is 120, and rather feeble. Recumbent, pulse 90. He can feel pricking or pinching in almost all parts of the foot, and refer it to its proper locality, but the sensation is always that of burning. Has been on the iodide of potassium. Within the past week the doctor thinks he has improved a little. Recommended increase of the dose (10 grs.) of the iodide, strychnia hypodermically, and electricity.

Bromide of potassium sometimes acts in a similar manner as regards dose; some physicians have given it in half-ounce doses, with good results. One physician knew of a case in which an ounce was taken at a dose with no unpleasant result; and a medical acquaintance, whose name I cannot now recall, had a patient, during the war, to whom an orderly gave a saturated solution, containing *two ounces*, for dispensary use, without its being known until the following morning. The effect was not greater than it sometimes is from half a drachm. A lady patient of mine took nearly half an ounce, in a state of desperation from insomnia, and showed no other bad effect than want of co-ordination of the muscles for some days. She was rather benefited otherwise. One unpleasant effect, however, of a concentrated solution, and of even the little lenticulars of Dunton, on an empty stomach, is a most violent though transient pain in the epigastrium.

The above phenomena have also been noted in the case of *quinine*. A case has recently been reported to me by Dr. Woodhull, a former surgeon of volunteers, where one of his men took an ounce of quinine, and no marked symptoms resulted. He sometimes gave half-ounce doses, and frequently doses amounting to half an ounce daily.* H. Wood, however, refers to the case of a man and wife, the former of whom took two ounces, and the latter one ounce, at one dose. The man died, and the wife "was recovered with difficulty." Many physicians believe that, after reaching a certain dose of the drug, say fifteen to thirty grains, you cease to get any response, and the larger doses are simply waste of a valuable drug. I am myself inclined to take this view, as in the case of calomel, half a drachm of which, at one dose, is as far, probably, as it is ever necessary to go.

(To be continued.)

Editors' Book Table.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

CYCLOPÆDIA OF PRACTICAL MEDICINE. Edited by *Dr. H. Von Ziemssen*, Professor of Clinical Medicine in Munich, Bavaria.

Vol. II. *Acute Infectious Diseases*. By Prof. Thomas, of Leipzig, Dr. Curschman, of Berlin, Dr. Zuelzer, of Berlin, Prof. Hertz, of Amsterdam, and Prof. Ziemssen, of Munich.

Translated by James C. White, M.D., and Edward Wigglesworth, Jr., M.D., of Boston, Edward W. Schauffler, M.D., of Kansas City, and A. Brayton Ball, M.D., J. Haven Emerson, M.D., George H. Fox, M.D., Edward Frankel, M.D., and John C. Jay, Jr., M.D., of New York. Albert H. Buck, M.D., New York, Editor of American Edition. New York: William Wood & Co. 1875.

The flattering commendation so generally bestowed by the American medical press, and the hearty welcome accorded by the profession to the first volume of Ziem-

* New York Med. Journal, Art. "On Hypodermic Treatment of Fever," by the Author.

ssen's Cyclopædia, warranted the expectation that the publishers would be encouraged to issue the succeeding—the second—volume at an early day. It is gratifying to perceive that these anticipations have been so speedily realized, and the second installment of "Acute Infectious Diseases" is at hand.

The discussion of varicella, measles, *rubeola*, and scarlet fever, is from the pen of Prof. Thomas, of Leipzig, who seems to have acquired, at an early period of life, an extensive reputation on the other, although hitherto unknown upon this, side of the ocean. The treatise upon measles is voluminous, and the literature of the subject, as far as it is comprised in the works of German authors, exhausted. A few Dutch and French authorities appear to have been referred to, but only a very few English writers, and these not of the more recent, seem to have been consulted, while, as in the first volume, American authorities are entirely ignored, with the exception of Drake, who is quoted once, and Salisbury. Regarding the etiology of measles, it is satisfactory to perceive that the author has not been carried away by the spore-theory of contagion, which appears to have captivated so many of his countrymen. Regarding its diagnosis in colored races, he asserts, upon the authority of Praver, that the eruption upon negroes "is distinguished by little vesicles." These were in all probability examples of intercurrent herpes, as the reviewer has had the opportunity to examine a large number—approximating one hundred—cases of this disease in negroes, in whom the eruption was invariably black; that is, much blacker than the prevailing tint of the negro's skin. In reference to the "measles-like eruption of dengue," there can be no liability to confusion to one at all familiar with the two diseases, the eruption of dengue resembling in no respects that of measles, as we have had the opportunity to verify on many occasions. No reference is made to the anæsthesia, especially paraplegic and gustatory, so characteristic of dengue. Concerning the treatment of measles, it

will strike an American practitioner as a novelty that for the "suppression of immoderate fever in the prodromal, and especially in the eruptive stage," "at present, cool baths, packings and extensive cold compresses are the usual means employed."

Is this the beginning of a new era of hydropathy? Or is it a new phase of the temperance movement?

The author rejects the term *rubeola* as a synonym of measles, claiming for it a specific identity with *Rotheln*, German measles, *roseola* or *rougeole*, and asserts, and we believe correctly, that this is the true nature of many of the so-called "second attacks" of measles.

The treatise upon *scarlatina* is from the pen of the same author, and consists of a very brief historical sketch, followed by an interesting paper upon the etiology of the disease, in which, in referring to the experiments of Hallier and Riess, the author concludes that "these experiments therefore render it highly probable that the contagious principle, having entered the blood, is disseminated by it throughout the body; and further, that it stands in some very intimate relation with these finest spores or micrococcus." Concerning the influence of social position, he asserts "that the mortality increases with poverty and decreases with affluence, though its dependence on the latter is not so apparent as in the case of measles;"—conclusions which experience in this country will scarcely justify. "Conditions of soil," he thinks, may also occasionally exert an influence, as likewise does "a residence in certain localities." The influence of age as a predisposing cause of the disease, is established by copious statistical tables. He thinks, too, that "those who have been operated upon, and the wounded," possess "a greater susceptibility to the disease." Influence of race he considers as undecided. He admits the possibility of second attacks of the disease, "besides a few reports of a third and fourth infection in the same individual."

The chapter on pathology is full. The affections of the lymphatic glands and the joints, and the diseases of

the kidney, together with the characteristics of the urine, receive their due share of attention.

The irregular forms of scarlatina, and its complications, are discussed at large, and are followed by a condensed epitome of its sequelæ.

As regards the treatment of scarlet fever, we most heartily endorse all that the author has to say upon the subject of prophylaxis, which may be summarized thus—*isolation, ventilation, disinfection, and thorough cleanliness.* The “*symptomatic,*” he claims, is the only rational and advisable treatment for scarlet fever; and while his commendation of *hydro-therapeusis* will receive the cordial endorsement of many, his frequent citations of Priessnitz suggest to the American reader the query, “*Can any good come out of Nazareth?*”

Dr. Curschman's treatise on small-pox consists of a summary of his own conclusions, deduced from personal observation of the disease, in the recent epidemic in Mayence, in 1870-71, and his investigations into the literature of this malady, from its earliest history down to the present time. Discrediting earlier accounts, the author considers as the earliest advent of the disease into Europe, the epidemic of 581, described by Gregory, of Tours, and the “*first scientific description of it, that of Constantine Africanus,*” of Salerno. Noting briefly its ravages in Europe, he refers to its spread thence to America, and its frightful ravages in Mexico, in 1527, and considers that the virulence of the disease was unabated by any remedial measures until the introduction of *vaccinia* by Jenner. The author regards, and justly, perhaps, the inoculation of the small-pox poison as of questionable benefit, inasmuch as, while it undoubtedly modified the intensity of the morbid phenomena in the individual subject, it at the same time multiplied morbid foci, from which it was capable of infinite radiation and reproduction.

The author offers no conjectures upon the subject of the etiology of small-pox, but furnishes some statistics

of the epidemic at Mayence, showing the relative susceptibility at different ages, together with a number of examples of the occurrence of the disease in extremely early periods of intra-uterine life, as early even as in the fourth and fifth months.

Regarding what might be termed its collateral morbid relations, he says: "It can be asserted with certainty, *that for an individual suffering from scarlet fever, measles or typhoid fever, there is, during the entire duration of the affection, a very slight liability to an attack of variola only;*" which, after all, seems to be asserting very little "with certainty," and, as far as regards measles, at least, the assertion will not be received with absolute certainty by some observers.

As to the liability o second infections of small-pox, the author is skeptical, although citing the example of Louis XIV, who died from a second attack of the disease, just fifty years after the occurrence of the first. He claims the purely specific nature of the virus, its residence in the pustule—although admitting the possibility of infection by inoculation of blood—its transmissibility by means of "perspiration" and "gaseous particles," and "the atmosphere about the patient," which, "imparting the contagion" to surrounding objects, "clings to them for a variable length of time." He asserts that "small-pox virus impregnating gaseous media, and excluded from the air, is possessed of very great permanence;" that "the contagion" is "readily destroyed" by exposure "to atmospheric air," but that high temperatures, the vapors of chlorine, iodine, bromine, sulphur and alcohol, act deleteriously upon the contagion only after very intense and long-continued influence.

The terms infection and contagion are used very loosely; sometimes apparently as synonyms, again distinctively, and sometimes objectively, to indicate a *matines morbi*, and again subjectively, designating the act of transmission of the same.

It is impossible to acquire any definite impressions upon this subject of epidemiology until writers shall have determined the correct etymology of the technical language in which their propositions are couched. A translator would seem to be warranted in so far violating literal fidelity as to correct such ambiguities.

In the short paragraph relating especially to pathology, the author's definition of the relations of variola and varioloid is by no means as clear as is desirable. "No one any longer considers varioloid as an independent disease, as was formerly zealously maintained. Every one knows that we see nothing further in this affection than one of the many forms in which small-pox is manifested, according to circumstances." In view of the universal belief in the essential relations of varioloid to vaccinia, it would have been better had this proposition been more restricted in its comprehension.

The period of incubation of small-pox, the author fixes "most frequently at from ten to thirteen days, less frequently fourteen days, or eight to ten days, and in one case only five days;" the "initial stage" at "three days," "as a rule;" the temperature "on the first day" "often" 103° to 104° , "on the evening of the second or third day, frequently" 105° to $105\frac{1}{4}^{\circ}$, and in some cases "even above 107° ." The observations of temperature were made "in the axilla," which, by the way, will be found very frequently to furnish a higher range of temperature than the mouth.

The symptomatology of the disease is given very fully and satisfactorily; but we must enter a demurrer to the proposition of the author, italicized upon page 373: "It is generally conceded that varioloid is nothing more than a form of small-pox, with a milder course and a shorter duration." Whatever may be the fact in Germany, no such general concession has been made in America, and the assertion will, we think, strike most of our readers with surprise.

From this he proceeds, quoting Hebra, to describe

several of these various forms of variola or varioloid, and then briefly to note the complications of the disease, after which he gives a well written sketch of its morbid anatomy.

The difficulty of early diagnosis, and the liability to confound the disease with syphilitic eruptions and acne pustulosa, are fully recognized, although no reference is made to a possible source of doubt which might occur in the eruption sometimes observed to follow the use of balsam copaiba, and which has been actually diagnosed as that of variola. "One pathognomonic symptom" is indicated, although "present only in the smaller number of patients. It consists in the hæmorrhagic initial exanthema, situated principally in the triangle of the thigh."

The mortality from small-pox is said to have diminished, since the last century, from 7 to 12 to 0.7 to 1 per cent. of the total.

As a prophylactic, the author's confidence in vaccination is thorough; but he has no confidence in its protective capacity when performed during the stage of incubation. Abundant evidence exists on this side of the ocean to demonstrate that the protective power of vaccination is efficient even during this period of incubation. The possibility of securing this protecting influence is suggested by the difference in the length of the period of incubation of the two diseases, that of vaccinia being two, while that of variola is generally from "ten to thirteen days." This suggestion has been practically and successfully acted upon so often as to leave no room for doubt upon the subject. The author's ideas on the subject of treatment are rational and judicious. He does not try to "cure the disease," but to keep the patient alive, and as comfortable as possible under the circumstances, and has no faith in efforts at abortion either of the disease or the eruption.

The discovery of vaccination is, justly, assigned to Jenner, and his merit is by no means diminished by the pre-existence of the knowledge that persons who

had contracted the vaccine disease enjoyed an immunity against small-pox. This fact constituted the essential premise of Jenner's induction, without which it could not have been made.

The origin of vaccinia is attributed to a similar disease occurring in horses, and the existence of manifestations of the same character in other animals susceptible of intercommunication, is asserted.

Dr. Curschman dissents from the belief in the deterioration of humanized vaccine, and perceives no advantages in the use of non-humanized virus. He is very justly skeptical concerning the transmission of constitutional diseases, more especially syphilis, by vaccination, and with equal justice attributes the very rare instances in which such results have occurred, to carelessness in the selection of the subject and of the lymph, and in the performance of the operation. He is a warm advocate of compulsory vaccination by State interference—a proposal which presents to Americans two phases so strikingly contrasted as to necessitate great deliberation in its adoption or rejection. The subject of re-vaccination is entirely ignored, except incidentally.

Taken altogether, Dr. Curschman's article is an excellent compendium of the state of knowledge upon the subject of which it treats, and will constitute a very useful work for the general practitioner. H.

ESSAYS ON CONSERVATIVE MEDICINE AND KINDRED TOPICS. By *Austin Flint, M.D.*, Professor of the Principles and Practice of Medicine and of Clinical Medicine, in Bellevue Hospital Medical College, New York. Philadelphia: Henry C. Lea. 1874.

Prof. Flint's name has been so thoroughly identified with conservatism, that it appears with peculiar propriety upon the title page of a volume devoted to its exposition. And the presentation of the thoughts and opinions of so accomplished a physician and so ripe a scholar, in this form, is a contribution to the literature of the profession which may exert upon it ultimately an influence as bene-

ficial as have some even of his more practical works. Every young man should read these "Essays," for he cannot fail to derive both pleasure and profit; and men of longer professional life and larger experience will likewise find perhaps some of their best thoughts formulated into language their best judgment confirmed by the conclusions of the author. The little book will become one of the classics of professional literature. H.

ON FUNCTIONAL DERANGEMENTS OF THE LIVER, Being the Croonian Lectures, Delivered at the Royal College of Physicians, in March, 1874. By *Charles Murchison, M.D., LL.D., F.R.S.*, Fellow of the Royal College of Physicians, Physician and Lecturer on the Principles and Practice of Medicine, St. Thomas Hospital; Vice-President and Consulting Physician, London Fever Hospital; formerly Physician and Lecturer on Medicine, Middlesex Hospital; and on the Medical Staff of H. M.'s Bengal Army. New York: William Wood & Co. 1875.

The notice of Dr. Croon, the founder of lectures of which this little book comprises one course, constitutes a graceful introduction to a series of admirable lectures, for the preparation of which the author's experience seems to have especially qualified him. The course consists of three lectures, of which the first is occupied with the physiology of the organ, which are formulated under three heads.

1st. The formation of glycogen, which contributes to the formation of animal heat and to the nutrition of the blood and tissues; and the development of white blood-corpuscles.

2nd. The destructive metamorphosis of albuminoid matter, and the formation of urea and other nitrogenous products which are subsequently eliminated by the kidneys, these chemical changes also contributing to the development of animal heat.

3rd. The secretion of bile, the greater part of which is reabsorbed, assisting in the assimilation of fat and peptones, and probably in those chemical changes which go on in the liver and portal circulation; while part is excre-

mentitious, and in passing along the bowel stimulates peristalsis and arrests decomposition,

It will be perceived that the author very justly rejects Liebig's theory of the production of animal heat exclusively to the destructive metamorphosis of carbonaceous ingesta, in the adoption of which that great chemist seems to have so strangely overlooked one of the most obvious results of the liberation of force by the disturbance of chemical affinities.

In the second portion of this chapter, devoted to "functional derangements of the liver," the relations between the hepatic and renal functions, as illustrated in the development of diabetes, are clearly defined. In estimating the importance of cholesterine as a pathological factor, the author differs from Dr. Austin Flint, Jr., arguing that "in cases of permanent closure of the bile-duct, cholesterine is not discharged from the liver into the bowel; it does not accumulate in the biliary passages, nor, if it be present in the blood, does it necessarily give rise to cerebral symptoms." Hence, "if the non-excretion of all the elements of the bile does not give rise to cerebral symptoms, it is difficult to understand how these symptoms can result from the retention of cholesterine alone." On page 120, the author endeavors to account for the "cerebral symptoms" symptomatic of certain morbid conditions of the liver, by the presence of "leucin and tyrosin," "deleterious products of disintegrating albumen," thereby apparently placing himself in the same dilemma which he assumes to be occupied by Flint. The author proposes a new system of classification of "Functional Derangements of the Liver," *i.e.* :
1. Abnormal Nutrition; 2, Abnormal Elimination;
3, Abnormal Disintegration; 4, Derangements of the Organs of Digestion; 5, Derangements of the Nervous System; 6, Derangements of the Organs of Circulation; 7, Derangements of the Organs of Respiration; 8, Derangements of the Urinary Organs; 9, Abnormal Conditions of the Skin. Which appears to be unnecessarily

extensive, the first three classes being evidently susceptible of reduction to one, from their essential correlation.

In considering the therapeutic action of mercury, the author avoids assuming a partisan attitude in reference to the cholagogue or acholagogue effect of the drug, assuming a position which, contradicting the experiments of neither side, may harmonize with both—*i.e.*, that mercury acts by unloading the portal blood of the waste matters contained therein, and also by facilitating the disintegration of albumen.

The book deserves even a more extended notice than has been attempted here, did time and space serve for the purpose. It certainly deserves to be read by all, and if read carefully, cannot fail to be highly appreciated. Not the least of its merits is the style of its publication, which is excellent, the clear type and fine paper being very attractive to the eye of a lover of good books. H.

TRANSACTIONS OF THE TWENTY-FOURTH ANNIVERSARY MEETING
OF THE ILLINOIS STATE MEDICAL SOCIETY, Held in the City
of Chicago, May 19th, 20th, 21st, 1874.

The transactions comprise various addresses, appropriate to such occasions, reports upon surgery, on galvanotherapeutics, on muriatic acid in the treatment of continued fever, on malarial diseases and their treatment, on continued immersion in compound fractures, in lacerated and in pointed wounds, contributions to the report on practical medicine, report on stricture of the urethra, on necrology, on otology, on orbital tumors, and on idiocy. The report upon surgery commends highly bloodless surgery, as accomplished by the process of Esmarch, which it regards as the inauguration of a new era in practical surgery, equal in importance to those which dated from the first ligation of an artery by Ambroise Pare, and the first joint-resection. The report is equally commendatory of pneumatic aspiration, and gives the preference for the performance of this operation to the aspirator of Mathieu, Paris. The report is

especially enthusiastic on the subject of the Bavarian or bi-valve splint of plaster of Paris, for the formation of which minute directions are given. Concerning anæsthetics, after a review of the Boston case of Mrs. Crie, and quotations from the experts examined on that occasion, the reporter admits the "growing conviction that the use of chloroform ought to be abandoned for the purposes of anæsthesia," and that he is himself "compelled somewhat sorrowfully to share in this conviction." He attributes the impunity with which chloroform was administered by army surgeons, during the war, to the fact of the customary previous administration of whisky. It seems strange that observers of the effects of anæsthetics should appear to have directed their attention exclusively to the condition of the heart, overlooking therein the modifications of innervation, proximately induced by the influence of these agents, and of which the changes observed in the condition of the heart are but secondary and remote consequences. The first effects of chloroform are undoubtedly manifested upon the nervous system, and assume the form of increased arterial tension, the direct result of vaso-motor irritation. An extension of this irritation, and resulting arterial tension, is soon apparent in the cerebral circulatory system, as indicated by the dilatation of the pupil and the extreme pallor of the now almost pulseless patient, whose heart still beating awaits the extension of this irritation to the pneumogastric nerve, to still its throbs in death.

The successful application of the postural treatment to the restoration of patients syncopeated by chloroform, demonstrates clearly the truth of the above proposition, the rationale of the treatment being simply the introduction by the operator of another mode of force, gravity, (Mayer's "falling force") to the restoration of the equilibrium between arterial and cardiac action, disturbed by the influence of the chloroform acting as a vaso-motor stimulant. The heart, overwhelmed by the combined influence of the *vis a fronte*, arterial spasm, and of the

vagus nerve, can no longer propel a sufficient amount of blood to the brain to maintain therein the degree of stimulation necessary to continue the circulatory process, and bring back to itself blood enough to maintain its own accustomed stimulus. From such a condition, escape is impossible by means of any auto-genetic agency. If the patient is now inverted, and maintained in that position, a new factor is introduced from without, gravity, under the influence of which the arterial tension is overcome by hæmostatic pressure, the blood descends in increased quantity into the vessels of the inverted brain, an increased supply of nerve force is developed, the pupils contract, the inhibitory influence of the vagus is overcome, more blood is admitted to the heart, this organ is awakened to renewed life, and with its restored activity the pulse beats anew, color and warmth return, and the normal equilibrium of function is restored.

The reports generally deserve extended notice, did time and space permit—none of them, perhaps, more so than that on Ophthalmology, by Prof. E. L. Holmes, and that upon Idiocy, by C. T. Wilbur. The reading of the proof has not been as carefully performed as it might have been, as is rendered apparent by numerous orthographical errors, which could scarcely be attributed to the authors of the papers. Taken altogether, the volume is exceedingly creditable to the members of the State Medical Society.

H.

THE COMPLETE HAND-BOOK OF OBSTETRIC SURGERY. By *Charles Clay, M.D.*, Late Senior Surgeon and Lecturer on Midwifery, St. Mary's Hospital, Manchester, England. Philadelphia: Lindsay & Blakiston.

The design of the author in this little book is implied in the title. While we have read the book with some interest, frankly, we cannot see the necessity of hand-books in any department of medicine; and least of all do they seem called for in obstetric surgery. Is it intended as the first book for a student? What student would be satisfied with the incomplete description of ob-

stetric operations and diseases which a small hand-book must necessarily contain! If unsuitable as a first book, it is not necessary as a review, which can be made in a completer treatise. Is it intended for the busy practitioner? What surgeon would perform ovariectomy with no other book than this to recall to his mind the many points in the operation! If it is convenient for the practitioner to consult this book in an emergency, it will be equally convenient for him to consult a completer monograph. Still, any one who has plenty of time and means to devote to books of all kinds, may also read this with some profit.

The arrangement of the subjects, which the book contains, in alphabetical order, may present some advantages, yet it seems like going from extreme to extreme to speak of the treatment of piles and hare-lip upon the same page.

The author says of chloroform as an anæsthetic agent, "we have no other that offers the same immunity from suffering." We believe this, the extension of an error; for every surgeon and obstetrician in America knows that sulphuric ether gives an immunity from pain quite as complete, while its use is infinitely less hazardous.

Further, "it is a singular and significant fact, that no death has been recorded from its use in midwifery;" this he attributes to, *first*, "That the patient is not (or at least ought not to be) completely thrown over into a state of perfect anæsthesia (or snoring), but kept just within the limit; not quite unconscious, yet not sensible to pain." This leads to the inference that an agent acknowledged to be extremely dangerous in surgery may be used with safety in obstetrics, attention being drawn only to the *degree* of anæsthesia. This is wrong. It may be that no death has been *recorded* from the obstetric use of chloroform, but at least two instances have been narrated to us of women who have died in labor, from the effects of chloroform, in the hands of

gentlemen experienced in its use. It is a fact, unfortunately, that death from chloroform occurs oftenest before the state of insensibility is reached, and when the victim is in just that state which the author urges is safe. The conclusion is, that chloroform is endowed with a property, peculiar to itself, which will surely destroy life under some circumstances which we are not able to recognize; further, in some instances, the inhalation of a few drops *only* is sufficient to kill. s.

PAMPHLETS RECEIVED.

THIRTEENTH BIENNIAL REPORT of the Illinois Institution for the Education of the Blind, for 1873, 1874, 1875.

ANNUAL REPORT of the Supervising Surgeon of the Marine Hospital Service of the United States for the Fiscal Year 1874. *Jno. M. Woodworth, M.D.* Washington. 1874.

JOURNALS RECEIVED.

- The American Medical Weekly—Vol. ii, Nos. 17, 18.
- The Archives of Dermatology—Vol. —, No. 3.
- The American Practitioner—Vol. xl, No. 65.
- The Canada Medical and Surgical Journal—Vol. iii, No. 10.
- The Cincinnati Lancet and Observer—Vol. xviii, No. 5.
- The Chicago Journal of Nervous and Mental Disease—Vol. ii, No. 2.
- The Clinic—Vol. viii, Nos. 17, 18, 19.
- The Detroit Review of Medicine and Pharmacy—Vol. x, No. 5.
- The Dental Cosmos—Vol. xvii, No. 5.
- The Eclectic Medical Journal—Vol. xxxv, No. 5.
- The Indiana Journal of Medicine—Vol. vi, No. 1.
- The Journal of Materia Medica—Vol. xiv, No. 5.
- Kin Le I Leiziu. Yokohama, Japan.
- The Laboratory, Boston—Vol. i, No. 10.
- The London Lancet, April, 1875.
- The Medical Times (Philad.)—Vol. v, Nos. 183, 184.
- The Medical and Surgical Reporter—Vol. xxxii, Nos. 17, 18, 19.
- The Medical Record—Vol. x, No. 17.
- The Medical Press and Circular, London—No. 1838.
- The Monthly Abstract of Medical Science—Vol. ii, No. 5.
- The Medical News and Library—No. 389.
- The Nashville Journal of Medicine and Surgery—Vol. xxxvi, No. 5.
- The New York Medical Journal—Vol. xxi, No. 5.
- The Ohio Medical and Surgical Reporter—Vol. ix, No. 3.
- The Pharmacal Gazette—Vol. iii, Nos. 65, 66, 68.
- The Practitioner, London—No. lxxxii.

- The Peninsular Journal of Medicine—Vol. ii, Nos. 4, 5.
 The Progrès Medical, Paris, 3c Année—Nos. 11, 12, 13, 14, 15.
 The Pharmacist, Chicago—Vol. viii, No. 5.
 The Psychological and Medico-Legal Journal—Vol. 2, No. 4.
 The Southern Medical Record—Vol. v, Nos. 2, 3.
 The St. Louis Clinical Record—Vol. ii, No. 2.
 The St. Louis Medical and Surgical Journal—Vol. xii, No. 5.
 The Virginia Medical Monthly—Vol. ii, No. 2.

COMPENDIUM DER NEUESTEN MEDIZINISCHEN WISSENSCHAFTEN.

By *Dr. B. Kraus*. Pages, 832. Vienna: Spornitz Perles.

Having been requested, by the author, to write a short criticism on the above work, I comply hereby with his wish rather reluctantly. The author is chief editor of the "*Allgemeine Wiener Medizinische Zeitung*," a medical weekly which stands deservedly high, for the really valuable articles it contains, mostly written by men of eminence, as for instance, Billroth, Pitha, etc. The Compendium comprises the auxiliary sciences to the study of medical diagnosis, viz.: Thermometry, Sphygmography, Percussion and Auscultation, Microscopy, Uroscopy, and the special branches, as Laryngoscopy, Anomalies of Speech, Electro-Therapeutics, Hygiene, and Toxicology.

The articles on the different topics are written in a concise style, though sufficiently exhaustive for practical purposes. They are mostly compiled by the author himself. At the end of each article, he gives a short bibliography used by him.

As I consider no medical work on any subject complete which does not refer to standard American authorities, the shortcomings of the Compendium are apparent. Austin Flint, Da Costa, Meigs, Pepper, Jacobi, and a good many others who have contributed to some of the above medical branches, are not mentioned. If a future edition should become necessary, the author will do well to correct this deficiency.

Anomalies of Speech, written by the well-known Dr. Coen, an authority in that especial branch of medical science, is treated in an excellent manner, as might be expected.

The article on Electro-Therapeutics comes from the pen of Staff-Surgeon Sewandowsky, treats the subject fairly, and quotes our countrymen, Beard and Rockwell, quite often. Toxicology and Hygiene emanates from the pen on the author's brother, Dr. Leopold Kraus; and as no

one can expect in sixty pages but a very short synopsis on those topics, the author has done justice to the subjects under consideration, in a very creditable manner.

The work, taken as a whole, reflects credit on its author, and deserves to be read by every physician who wants information on those medical subjects, and I have no doubt that a translation, performed by competent men, would meet with a favorable reception in this country.

CARL PROEGLER, M.D.

Addison, Ill., April 20, 1875.

[From the Jacksonville Daily Journal, April 10th.]

THE FEEBLE-MINDED.

This very worthy institution has been deservedly popular with the Twenty-Ninth General Assembly. Its economical administration has been so marked that the appropriations asked for ordinary expenses, by its Board of Trustees, were recommended in full by both the Governor and State Board of Public Charities, and was not reduced by any committee of the Legislature; and the bill passed the house on Wednesday, by 120 ayes and no nays.

This was the only appropriation bill which passed the House this session with no dissenting voices.

The bill appropriating \$175,000 for a new building for this Institution, also \$10,000 for land, has also passed both Houses, and been approved by the Governor. On its final passage in the House, it received 90 ayes, several of its friends being absent. It is to be hoped that a building may speedily be erected, in order that the unsafe tinder-boxes now occupied may be vacated, and the pupils sheltered in safe and convenient buildings at an early day.

ELOQUENT SPEECH.

During the discussion on the bill to appropriate money to erect buildings for the Feeble-Minded, the Hon. E. Callahan, of Crawford county, made the following eloquent speech :

MR. SPEAKER: The gentleman from Whiteside has spoken strongly against the passage of this bill, and made his appeal to this reform legislature to rally at this point to stop the flow of money which we have been voting out of the State Treasury. Why this rally

in favor of economy should be made when the feeble-minded children of the State, without reason enough to guide and care for themselves, are pressing their plea for charity, I cannot tell. I am prepared to respond to any proper appeal for economy in the expenditure of public money. I am as careful as any member on this floor about voting for appropriations of a questionable character. I would throw around the treasury all proper safeguards. I believe in taking care of money. But, sir, in civilized countries there are higher duties and more sacred obligations than hoarding or saving money. One of these duties is to care for the unfortunate who, through physical or mental disability, are unable to care for themselves. History tells us that in the distant past there were nations who relieved themselves from the support of these unfortunates by destroying their lives. Sometimes they were directly and openly killed; sometimes left in exposed positions to perish by the vicissitudes of the weather, by hunger and thirst, or to be destroyed by wild beasts. Civilized nations reject the theory of these barbarians—deny the right to destroy life, and accept the duty of care and support. It seems to me that gentlemen who vote against this bill are proposing to go back to the barbarian theory, and leave these poor children, in whose darkened minds the brightest flashes of reason are but as the twilight, unguided, unprotected, uncared for, to perish after suffering all the refinements of cruelty which are born of neglect. I was but recently a visitor at this institution. I never saw anything that so strongly moved my pity. I was astonished at its success in the education of these poor children, in whose minds reason is but a glimmering spark, and not a guiding star. Dr. Wilbur and his assistants have succeeded beyond expectation in their efforts to strengthen and direct their minds. They may never become valuable members of society, but if they only learn to care for themselves, the benefit repays the outlay. I will not attempt argument—though arguments are numerous. Every tongue and voice of humanity pleads for them, and I accept the plea and shall vote for the appropriation. I will say further that I fully concur with the gentleman from Bureau (Mr. Herron) that the building in which these children are kept is a disgrace to the State. It is an old wooden building, as combustible as a tinder-box. If it should take fire, the escape of the inmates would be next to impossible. They should not be kept in this

peril of life a single hour longer than is absolutely necessary to provide other and safer quarters for them. The State cannot longer neglect to make this provision without subjecting its good name to reproach. Let us make this application and found this public charity, and practice our economic policy in measures where the unfortunate and the helpless are not so deeply concerned.

A DESERVED COMPLIMENT.

(From the "Spectator.")

"The admirable work of Dr. J. Adams Allen, called 'Medical Examinations for Life Insurance,' and published by the Spectator Company, has now been five years before the insurance public in America; and the rapid sale of many successive editions has shown that its merits are highly appreciated here. But as it is especially adapted to American methods of doing business, and to the common American forms of application for a life policy, it was not designed for a foreign market, and probably its author never anticipated for it a circulation in Europe.

"But a book now comes to us from Berlin, entitled 'Der Gesellschaftsarzt; Handbuch für Lebensversicherer; Herausgeber, Dr. A. F. Elsner,' which is highly recommended as the best manual for medical examinations accessible to German physicians. On a careful examination of this work, we find thirty-seven pages occupied with a very good glossary of medical terms; eighteen more devoted to an index; and the remainder filled with an almost literal translation of Dr. Allen's work, embodying the whole of it, except that the appendix is omitted and the preface condensed.

"Dr. Elsner is the editor-in-chief of the Berlin 'Versicherungs-Zeitung,' and is a gentleman of such high repute and responsibility in his own country, that his name is a guaranty of excellence. Had he merely published Dr. Allen's work with his approval, the compliment would have been a very high one. But he has taken the entire work, and 'made it his own' by displacing Dr. Allen's name from the title page and setting his own name there; surely, the most emphatic act of approval and eulogy that ever an author conferred on another. Dr. Elsner's willingness to vouch for the book seems to be absolute; since there is no mention of Dr. Allen's name in his edition, except that in the last paragraph of the preface, he remarks, incidentally, that the work has been prepared 'with the assistance (au der Hand) of a work by Professor J. Adams Allen, of Chicago.' In short, just as Paris bore a stronger testimony than words could express to the beauty of Menelaus's wife, when he carried Helen off—just as Jack Sheppard, by pocketing Lady Barker's diamonds and disregarding her silver plate, paid the highest compliment in his power to the rare stones—so Dr. Elsner's practical eulogy of Dr. Allen's book, leaves nothing to be added in the way of a tribute to its merits."

Caution to Intending Subscribers to Ziemssen's Cyclopædia of the Practice of Medicine.

As this great work progresses, it is possible—from some subscribers breaking up their sets, or from other causes—that occasional odd volumes may be offered for sale. Those who desire the complete work are warned against purchasing these, as the Publishers do not engage to supply parts of sets.

Every subscription must be for the entire work. No volumes will be sold separately.

Wm. Wood & Co., Publishers,
27 Great Jones Street, New York.

Chicago Mortality Report for April, 1875. Reported by Dr.
BEN. C. MILLER, Sanitary Superintendent.

Accident, crushed	1	Gastritis	6
" by fall	3	Gastro-enteritis	7
" by drowning	3	Hæmorrhage	1
" by poison	1	Heart, disease of	8
" run over by buggy	1	" dropsy of	2
" by railroad	5	" fatty degeneration of	1
Angina pectoris	1	" organic disease of	2
Apoplexy	4	" paralysis of	1
Asthma	1	" valvular disease of	4
Atelectasis pulmonum	1	Hepatitis	3
Bowels, hæmorrhage of	1	Hydrocephalus	6
Brain, congestion of	5	Inanition	22
" disease of	1	Injury at birth	1
" paralysis of	1	Intussusception	1
" inflammation of	14	Indigestion	2
" softening of	1	Icterus	1
Bronchitis	16	Ilio colitis	3
" capillary	11	Influenza	1
Cancer	1	Kidneys, Bright's disease of	2
" of abdomen	1	" inflammation of	1
" of bowels	1	Laryngitis	1
" of liver	1	Liver, cirrhosis of	2
" of stomach	1	" disease of	2
" of uterus	1	" inflammation of	1
Child birth	1	" hypertrophy of	1
Cholera infantum	14	Lungs, apoplexy of	1
Consumption	67	" congestion of	10
Convulsions	54	" hæmorrhage of	2
" puerperal	2	" abscess of	1
Croup	10	" malformation of	1
" membranous	3	Manslaughter	1
Cyanosis	2	Metro peritonitis	2
Debility, general	6	Measles	19
Delirium tremens	2	Meningitis	15
Deficient development	1	" cerebro-spinal	9
Diarrhoea	12	" tubercular	5
" chronic	2	Myelitis	1
Diphtheria	6	Neurosis of pneumogastric	1
Dropsy, general	13	Ovaries, degeneration of	1
" abdominal	1	Œdema glottides	1
Dysentery	5	Old age	16
Dyspepsia	1	Paralysis	3
Embolism	1	Pericarditis	1
Endo-carditis	4	Peritonitis	4
Enteritis	13	" puerperal	2
Entero-colitis	1	Pneumonia	55
Epilepsy	1	" typhoid	4
Exposure	2	Pleurisy	2
Erysipelas	3	Rheumatism	2
Fever, congestive	2	" inflammatory	1
" intermittent	2	Scrofula	3
" puerperal	7	Septicæmia	1
" remittent	4	Small-Pox	3
" scarlet	17	Spina bifida	1
" typhoid	10	Stomach, softening of	2
Fungus medullaris	1	" hæmorrhage	1
Glands of throat, disease of	1	Suicide, by cutting throat	3

Suicide by shooting.....	2	Uræmia.....	3
" by poison.....	1	Vitality, deficient.....	1
Syphilis.....	2	Whooping cough.....	2
Tabes mesenterica.....	22		
Teething.....	5	Total.....	644
Tumor.....	2		

Premature births, 8; Still births, 69. Total, 77.

COMPARISON.

Deaths in April, 1875, 644; in March, 1875, 550. Increase, 94. Deaths in April, 1874, 486. Increase, 158.

AGES.

Under one year.....	248	Twenty years to thirty.....	59
One year to two.....	66	Thirty " " forty.....	56
Two years to three.....	30	Forty " " fifty.....	37
Three " " four.....	11	Fifty " " sixty.....	33
Four " " five.....	9	Sixty " " seventy.....	25
Five " " ten.....	23	Seventy " " eighty.....	22
Ten " " twenty.....	19	Eighty " " ninety.....	6
		Total.....	644

White.....	636	Males.....	329	Married.....	192
Colored.....	8	Females.....	315	Single.....	452
Total.....	644	Total.....	644	Total.....	644

NATIVITIES.

Africa.....	1	England.....	11	Scotland.....	3
Austria.....	1	Germany.....	84	Shetland Islands.....	1
Bohemia.....	7	Holland.....	1	Sweden.....	9
Canada.....	9	Ireland.....	52	Switzerland.....	2
Native—Chicago.....	111	Italy.....	1	Unknown.....	8
Foreign, ".....	233	Norway.....	4		
U. States, other parts.....	104	Poland.....	1	Total.....	644
Denmark.....	1				

Deaths daily, 21½. Mean thermometer, 44°. Rain fall, 2.32 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.	Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	4	5,725	one death in 1,431	11	20	14,022	one death in 701
2	6	4,830	" " 805	12	19	16,792	" " 884
3	17	14,861	" " 874	13	29	17,892	" " 617
4	8	15,361	" " 1,920	14	29	16,720	" " 576
5	26	20,078	" " 722	15	95	45,545	" " 476
6	55	35,916	" " 653	16	41	21,922	" " 535
7	54	31,722	" " 587	17	21	20,777	" " 989
8	33	29,143	" " 767	18	39	21,392	" " 549
9	46	31,654	" " 688	19	7	4,677	" " 668
10	15	17,385	" " 1,159	20	10	8,995	" " 899

Ratio of deaths to population in 1874, one death in 614.

No. deaths in Wards.....	579	Manslaughter.....	1
Accidents.....	14	Poisoned.....	3
Chicago River.....	2	St. Joseph's Hospital.....	1
County Hospital.....	10	Suicides.....	6
Foundlings' Home.....	21	Woman's Refuge.....	1
Hospital Alexian Bros.....	3		
Mercy Hospital.....	3	Total.....	644

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EDITED BY J. ADAMS ALLEN, M.D., LL.D.: AND WALTER HAY, M.D.

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Original Communications.

ARTICLE I.

CEREBRAL MENINGITIS (INTERCURRENT).

By WALTER HAY, M.D., CHICAGO.

A. McM., æt. 10 years; Jan. 10, 1875, the third day of an attack of measles, had moderate eruption over face, neck, chest and arms, slight febrile reaction, the usual coryza and catarrh. Was ordered the following: *R. Liq. Ammon. Acet.*, 3j, every two hours; and *R. Syr. Scillar*, gtts. xxv; *Spts. Ætheris Nitrosi*, gtts. xv. *M.* Every alternate two hours.

January 11 and 12, was progressing satisfactorily, but as she did not sleep well last night, was ordered to take *Chloral Hydrat. grs. v*, in water, at bedtime; the treatment to be continued otherwise.

Jan. 13. Slept well last night, and at 10 o'clock was less feverish; more comfortable generally. At 12 M. was seized suddenly with intense headache, delirium, vomiting and unilateral convulsions, involving the face and

both extremities of the right side, the right eye being drawn upward and outward (3d, 4th and 6th nerve implicated), (such was the report of the Sister of Charity in charge). At 3 P. M. she was dull and stupid, indicating by gestures pain in the head, and was roused to attention with great difficulty; the eyelids were half closed, the pupils dilated and responding very slowly to strong sunlight, the irides of both eyes reduced to about one-half a line in width, the vessels of the sclerotic injected; the face was deeply flushed, the tongue covered with thick white fur, and protruded with great difficulty; the bowels were constipated, the urine scanty and loaded with amorphous urates. Pulse, 120; respirations, 33; temperature, 101.8° Fah. *R.* Hydrarg Sub-Mur., gr. j; Quiniæ Sulph., gr. j. *M.* Every two hours. Also, *R.* Fl. Ext. Secale Cornut., gtts. x. Every alternate two hours. Ice to head, and the discontinuance of all other treatment.

Jan. 14, 10 A. M. Had rested tolerably during the night; the bowels and kidneys had acted copiously at 6 A. M. Her countenance is bright; she smiles when spoken to; the pupils are contracted to one-half their former diameter, although still somewhat dilated; the vessels of the sclerotic no longer visible; has no headache; pulse, 80; respirations, 20; temperature, 98°; has had no repetition of the convulsions. *R.* Fl. Ext. Secale Cornut., gtts. x. Every four hours.

Jan. 15. Convalescent. Discontinue treatment.

This case is reported as an unusual case of incipient cerebral meningitis supervening in the course of a fully developed exanthem, without retrocession of the eruption. Sidney Ringer (Reynolds' System of Medicine, London edition, 1870, vol. 1, page 196; article Measles, Complications and Sequelæ,) says: "Convulsions, not uncommon in children at the very commencement of the attack, are usually without danger. They may, however, be repeated and terminate fatally. Occurring, by no means commonly, at a later period of the

disease, they are then usually repeated, and accompanied with some severe internal inflammation, mostly of the lungs. At this period they are generally fatal."

The case in point could not be included in the first category, although it might be in the second, allowance being made for the difference in the location of the accompanying inflammation, i.e., in the cerebral membranes, instead of the lungs. Ringer, however, in the passage quoted above, evidently indicates "convulsion" as the essentially important complication, whereas in the case which I have reported above, convulsion was but an epiphenomenon of a meningitis already established, and indicated by the headache, delirium and vomiting, which preceded the convulsion.

That this was the true pathological relation was, I think, demonstrated by the effect of remedies, more especially of the ergot, which I am persuaded would not have prevented the repetition of the convulsion, as it did, had that been other than a secondary lesion.

Dr. Frederick T. Roberts (Handbook of Practical Medicine, Am. edition, 1874, page 188; article Measles, Varieties; 4. Graviore—malignant, black, or hæmorrhagic) says: "There is great depression and prostration, with a very weak, frequent and irregular pulse, cold extremities, a dry and brown tongue, and sordes on the teeth and lips; twitchings, picking at the bed-clothes, *convulsions*, *delirium of a low* and muttering character, or stupor, are generally present very early." A description which in no way applies to the case reported.

Trousseau (Lectures on Clinical Medicine, third (Am.) edition, 1869, page 218, article Measles), speaks of convulsions occurring at the onset of the fever, of measles, and of many other affections, being simply a continuation or intensification of the rigor which usually initiates these maladies, remarking, very justly, that rigor is "really a convulsion," the one clonic, the other tonic. And again, the same author, on page 235, refers to a repetition of these convulsions "in the last stage of the

disease," "preceded or followed by cerebral disturbance characterized by stupor," "which generally carry off the patient;" and to "the nervous complications of the last stage of measles which originate in formidable chest affection." The author, however, nowhere refers to any condition at all comparable to the case reported herein.

Flint, (Principles and Practice of Medicine, 4th ed., 1873, page 993, article Measles) says: "Convulsions sometimes occur in this stage (of invasion). In general, they are not indicative of danger." Upon the subject of cerebral complications, otherwise, he is silent.

Niemeyer (Text-Book of Practical Medicine, Am. revised ed., 1874, page 527, article Measles) refers incidentally to "pain in the head, . . . vomiting, disturbed sleep, and in excitable children, delirium," as occurring "also during simple catarrh from catching cold;" and again, on page 531, referring to "asthenic septic measles," he says, "the patient may die of the increasing prostration which is occasionally interrupted by *eclamptic spasms* even before the appearance of the eruption."

Thomas (Ziemssen's Cyclopædia of the Practice of Medicine, first ed. (Am.), 1875, page 97, article Measles), says: "Conspicuous among the affections of the nervous system are: Meningitis (Spiess, Voit, Meyer-Hoffmeister, Kellner, Constant, Loschner, Thore, Bufalini, Krug); tonic spasms (especially in the flexors of the extremities, rolling spasms of the head, two days after the eruption, accompanied by its disappearance: Pinkham); convulsions and eclampsia, usually with similar effect on the exanthem at different periods of the same."

From these citations it seems clear that, the cerebral symptoms, complicating the attack of measles in this child, are unfamiliar to the profession in England, France and America, since the most recent standard authorities are silent upon the subject—for the pathological conditions indicated by Ringer, Roberts, Trousseau and Flint vary essentially from that of the subject of this report,

nor do those described by Niemeyer correspond much more closely. The latter author is probably the best known among Germans to American students, while the writings of those quoted by Thomas (Ziemssen's Cyclop.) are doubtless, to the vast majority of English speaking and reading physicians, sealed books.

Having met with no similar case, amongst some hundreds observed during more than twenty years of practice, I was induced to examine the literature of the subject as far as it was accessible to me, to determine how far my own experience might be sustained or refuted by other observers, with the results above recorded.

But, that this was actually an intercurrent meningitis, may be disputed by some. On this head, the definition of Trousseau (op. cit., vol. 1, page 527) is sufficiently explicit: "I need not remind you that the invasion of ordinary meningitis is generally announced by vomiting, pain in the head, which is sometimes fearful, by constipation, and in children by convulsions;" than which a more accurate epitome of the phenomena of this case could not be drawn.

No. 168 STATE ST.

ARTICLE II.

CASE IN PRACTICE.

By B. F. FARLEY, M.D., CHEBANSE, ILL.

Mr. C., bachelor, æt. 62, by occupation a farmer. This patient consulted me in the early part of March last, at which time I gathered the following history: About six weeks previously he had been attacked with very severe diarrhœa, with a moderate amount of pain and tenderness, distressing nausea without emesis, thirst, more marked early in the disease. The discharges from the beginning have been simply "frequent, thin and watery."

The patient had been under treatment since the first symptoms of a serious nature made their appearance. He now complains most of debility, pain and tenderness in the hypogastrium and left hypochondrium, also pain in umbilical and either lumbar region, but less marked than in the hypogastric. The tongue is slightly coated whitish, the margin and tip being abnormally red.

There has been much headache, and vertigo on assuming a sitting or standing posture; the appetite is variable, and the ingestion of food produces pain and flatulency, followed, in a short time, by one to three passages in quick succession; the pulse is rather frequent and small.

I prescribed hyd. chlo. mit., rhei. pul., and sodæ bicarb., in moderate quantities, once in three hours, until very free catharsis was produced, followed by quinia sul., bismuth sub nit., tannin, and opium, two to five times a day, to control diarrhœa, and directed him to return in about one week.

Upon the patient's second visit, he complained of feeling somewhat better but not free from diarrhœa; there was less pain and tenderness than on his first visit. Now I have come to the remarkable feature of this case: the passage, by the patient, of a number of pieces of *oyster shells*, very irregular in form, and in size varying from two or three lines to one inch in diameter; the larger piece is not less than one inch in its shortest diameter. These bodies produced, in their passage, some hæmorrhage, but not very considerable; the shells were passed during the catharsis produced by the calomel and rhubarb. During the few days following, large amounts of the mucous membrane sloughed and came away with the passages from the bowels, and have continued to appear, from time to time, in large amounts. The patient tells me that many times he has been obliged to remove the accumulations with his fingers, the efforts of defecation not being sufficient for their expulsion. The amount of membrane which has been passed, and which I have seen is truly remarkable, and although I saw

neither the shell nor membrane *when* passed, I have seen the latter in the fecal matter *as* passed, and have every reason to believe the statements of the patient, especially as he is a man of much intelligence, and truthful.

The treatment has been tonic and astringent, principally, such as a pill of opium and argenti nit., powders of opium, quinine, and bismuth, and such like treatment, with carefully regulated diet.

The patient is now improving gradually. It is the rarity of such cases that has induced me to write this up thus hastily, as I have done. If I have reported anything interesting or instructive, I have my reward.

ARTICLE III.

A CASE OF INTESTINAL HÆMORRHAGE IN AN INFANT ONE DAY OLD.

By NORMAN BRIDGE, M.D., CHICAGO.

Mrs. J. T. W., a healthy American woman of 30 years, had borne two healthy children, the youngest being two years old. She gave birth, May 1st, 1875, at 10 A. M., to an apparently healthy girl, at full term, and after an easy labor. The child was to all appearance perfectly normal. It slept most of the time until the next morning at 3 o'clock, when it nursed for the first time. It nursed three times within an hour and went to sleep again. It did not waken for more than a moment until 10.30 A. M., when it was found to have had a dejection of almost pure venous blood. The dejection was large, and was followed within half an hour by two others of the same material, each one successively being less copious. With each discharge from the bowels there was vomiting of dark grumous matter, small in quantity. There was little or no outcry, and the child died at 2 o'clock, of exhaustion.

The autopsy (twenty-four hours after death) revealed

the descending colon enormously distended, it being in some places one and one-half inches in diameter. It was greatly elongated; the loop of the sigmoid plexure reaching across the abdomen to the right iliac region. This part of the intestine was likewise deeply congested, dark red in color, and very much thickened. The mucous membrane was rough, softish, and covered with a dirty mucus. The gut contained chiefly gas and clots of blood. The whole of the large intestine was more or less congested, but the small intestine appeared normal. The stomach was enlarged; its walls were thickened and congested, and its cavity was filled with a black mixture, like the matter vomited, only darker in color.

The heart, liver and lungs were normal.

It ought to be stated, however, that at birth the child was covered with a large amount of offensively dirty slime, and the fluid forced out of the womb immediately after the expulsion of the child had this appearance of offensiveness so markedly, that at the time it was suggested that meconium had been discharged before birth.

There was nothing learned in the family history that could throw any light on the cause of the phenomena observed in this case.

ARTICLE IV.

FEMORAL HERNIA.

By JOHN McLEAN, M.D., Du Quoin, Ill.

Mrs. H—, æt. 42, mother of ten children. Attacked Nov. 8, 1874, with cholera morbus. After a few hours the bowels ceased moving. Vomiting continued. On the 9th was seen by a physician, who diagnosed her case one of intussusception, and treated her accordingly, until the 16th. Eight days after the attack, when I was called at his request, I found her with a pulse of 130;

respirations, 28; skin cold and clammy, and vomiting stercoraceous matter; abdomen flaccid, and free from pain or soreness upon pressure. But upon an examination of the right femoral region, found a tumor the size of a walnut which I at once diagnosed a femoral hernia, and proceeded to operate as soon as the patient could be brought under the influence of chloroform.

The first thing brought to view was the appendix vermiformis and the adjacent colon and illium, all of which were in a gangrenous condition. Cut away the appendix, and made a longitudinal incision one inch in length in the colon, commencing at the illeo cæcal valve. I then relieved the gut from the constriction, drew the edges of the wound out to the wound in the skin, and attached them with sutures; then passed my finger in each direction of the gut, when fœcal matter came away.

The recovery was rapid, and all the alarming symptoms subsided at once.

The bowels were evacuated through the artificial opening for two weeks, when an evacuation per rectum occurred, followed by others each day. The artificial opening discharged only a watery substance up to about February 1st, 1875, when it ceased entirely to discharge, and is now almost entirely healed, and the woman is in good health.

ARTICLE V.

CANCER OF THE PYLORUS — DEATH — AUTOPSY
—MICROSCOPY AND PATHOLOGY.

By J. H. ETHERIDGE, M.D., CHICAGO.

Mrs. — — —, æt. 63, had complained many months of a gradually increasing dyspepsia, prior to New Years last. Twice or three times she had been prescribed for, for her supposed indigestion. Her malady first manifested itself by acid eructation and distress in the

region of the stomach. These gradually increased till she had reduced the range of her dietary to a very few articles of food. The eructations became more copious, coming on at first an hour or two after meals. Soon she began to have them after retiring at night, and her rest was very much broken.

Jan. 16, 1875. I saw the patient, first time, to-day; prescribed fifteen drops dilute hydrochloric acid before meals, and pepsine and pancreatine after meals.

Jan. 18. No better. Is kept awake so much at night, by acid eructations, that her strength is decreasing; sleeps not more than two hours during night; when she does sleep she is suddenly awakened by strangling from the large amount of eructation.

Gave fifteen grs. subnitrate of bismuth three times a day, and at bedtime ten grs. of chloral and eight grs. of bromide of potassium. Immediately after this, her nights became better; the eructations varied in amount—some days being much less than before, on other days they were as copious as ever. The gastric distress varied greatly also. She ate more—bore more food. Some days she even got along without a symptom—and others were full enough of distress.

Jan. 29. 11 P. M. Found her troubled with vomiting, and it continued for a few hours. No apparent cause could be detected—no irregularity or indulgence in food could be found to account for it. Mustard to the epigastrium was followed by cessation of this troublesome symptom. Suspicion of malignancy was at once aroused, and subsequent consultation with Professor Byford, at the patient's request, decided me to call it cancer.

From this date the history of the case was the ordinary account of gastric malignant disease. Progressive emaciation, debility, and the complexion of the cancerous diathesis, were conspicuous. Vomiting, while giving carbohc acid (1 gr. four or six times a day), seemed to be

controlled, and for nine or ten days she did not vomit at all.

Feb. 14. She recommenced vomiting, however, in spite of this drug, and was incessantly nauseated for many days. Opium to partial narcosis was thereupon exhibited, with the effect of holding in check this frightful symptom.

For five weeks and two days she was fed by rectal injections four or six times daily, of beef essence, wine and milk.

Throughout, she had *none* of the pain in the gastric region which is so generally present as to be termed *characteristic pain*.

Eleven days before death she was in the ataxic, crocidismic, carphologic condition seen in the third week of dothrinenteritis. Regular omichesis, one of the *occasional* accompaniments of ischuria vesicalis, was a characteristic of the condition of the latter days of the patient, although she was, during that time, suffering from a continually distended bladder.

The condition of the bowels presented naught worthy of notice till six days before her demise. At that time there were five or six fæcal dejections daily for three consecutive days. During this time she must have voided more than a *chamber vessel full of solid feculent matter*. Prior to this, the bowels moved very irregularly—sometimes daily and sometimes twice a week, movements being small in amount, and generally were the remnants of the imperfectly digested clysters.

The skin, tongue, thoracic and pelvic organs presented nothing worthy of mention.

I have reserved one feature of this case, antedating, many years, the condition now under consideration, of purpose to call special attention to it as a probable precursor of malignancy. About thirty years ago, the patient was poisoned with arsenic, in partaking of some cold chicken that had been cooled, after cooking, in a new refrigerator, arsenic being absorbed by the fowl, in

sufficient quantity to poison herself and family. Acute arsenical poisoning followed, the intensity being insufficient to produce death in any member of the family. Ever after that the patient suffered from gastric disorder, which had never before existed. During all these thirty years she could not eat certain articles of food without suffering; at times she had epigastric pain and tenderness; occasional vomiting also troubled her; in short, all through these thirty years she was not as she used to be, prior to partaking of that cold chicken, because of chronic gastritis.

PATHOLOGY AND MICROSCOPY.

By I. N. DANFORTH, M.D., CHICAGO

The pyloric orifice of the stomach was nearly closed by a dense, hard, constricting band. It was only by the exercise of considerable effort that I could force the tip of my little finger through it; in fact, communication between the stomach and duodenum was practically cut off. Nearly the entire surface of the stomach was intensely inflamed—and, from the distended and tortuous state of the vessels, it was evident that this inflammation was no new thing.

Microscopic examination of sections of the proper walls of the stomach revealed nothing more than the ordinary inflammatory changes, namely, thickening or "hyperplasia" of the submucous connective tissue, and of the inter-follicular connective tissue; and also the usual distension of the peptic glands by the rapid proliferation of their epithelial lining.

The indurated band surrounding the pylorus cannot be disposed of so easily. What is this indurated mass? Is it malignant in its character? or is it merely inflammatory new formation? or, lastly, was it originally inflammatory new formation, which at last suffered an invasion of cancer cells? Of course these questions can-

not be answered absolutely, but I think we have a fair basis for the formation of an opinion.

The gross appearances of the mass are altogether indicative of cancer. It is dense, hard, unyielding, with that peculiarly "springy" or "hard-rubber" feel which we have all so many times noticed. Under the scalpel, it gives the regular orthodox sensation, as though one were cutting a piece of ill-formed cartilage—or rather a mass of dense fatty tissue, into which some stray cartilage had straggled. The cut surface shows the "pearly-blue" color, so characteristic of fresh young scirrhus. If the examination were not pushed beyond the naked-eye appearances, then, we should at once conclude that we were dealing with a case of unadulterated scirrhus. Immediately after the stomach was removed from the body, I incised the indurated mass, scraped from its cut surface a drop of "juice," and placed it under a small microscope. The characteristic "atypical cells" of Billroth were at once seen to be present, both by myself and several medical gentlemen in attendance, and we felt ourselves warranted in pronouncing the disease "*cancer*." The further microscopic study of this case has been very interesting and instructive. I made forty or fifty thin sections in various directions, stained them with Thiersch's carmine, and then prepared them for mounting in damar. Of these specimens, I have mounted, and carefully studied nine; but as they are uniformly of substantially the same structure, perhaps I am now warranted in making a few observations upon them.

In the first place, the basis of every section examined seems to be fibres or fibre-cells; that is, spindle cells. The fibres are the small symmetrical fibres of inflammatory new formation; they are woven together precisely as they generally are in inflammatory new growth, and not after the "honey-combed" manner of the fibrous stroma of scirrhus. The spindle cells are exactly such as we should expect to find in an unsuspected mass of inflam-

matory induration; they are the ordinary uni-nucleated cells of connective tissue, which are undergoing a hyperplastic process.

But insinuated among these proliferating connective tissue cells, are occasional groups of cells of a far different nature, and of radically different appearance. I find here and there, in irregularly linear groups or rows, asymmetrical or atypical cells. Sometimes these cells occur in groups or "nests," similar to those which are found in schirrus of the breast; but they are generally arranged in linear rows, or "cylinders."

Another fact worth mentioning, and, indeed, quite important in connection with the history of the case, is this: That most of these atypical cells are half developed or young cells; and, from the manner in which they are huddled together in irregular groups, which include immense numbers, we are compelled to conclude that they were growing very rapidly at the time of the patient's death.

This case was doubtless, in the first instance, one of simple inflammatory induration; as such it for a long time remained. Meantime the whole stomach became gradually involved in the inflammatory process by simple communication from cell to cell. At last the indurated mass around the pylorus was invaded or "infiltrated" by true cancer cells. I think the term "invaded" expresses the real fact most nearly. The inflammatory induration was, from the outstart, a tissue of low type, and poorly able to resist an outside attack. But while the submucous connective tissue was undergoing this indurating process, the contiguous mucous layer and its epithelium was gradually yielding to the demoralizing influence of a diseased process. *Now, if an epithelial cell be in any degree estranged or provoked from its own proper law of growth, there is always danger that it may never return to its own proper law of growth; that is, that it may become, in its future generations, ATYPICAL or LAWLESS—and that is the very essence of malignancy.*

Just such an event, I think, did occur in this place. The inflammatory process was the primary process, commencing many years before death ; the cancerous invasion only occurred after years of constant "teasing," probably not till the physiological integrity of the mucous tissue had been practically destroyed. The history of the case points to the same conclusion, and we are also borne out in this belief by authorities of extended observation and large experience.

This case demonstrates, in a striking manner, the strict truthfulness and importance of Mr. Arnott's observation, that thin sections, covering some considerable extent of surface, must be studied, if we would avoid errors. If the "scrapings" or "juice" alone of this specimen had been examined, we should have jumped at the conclusion that the case was primarily one of cancer. But when thin sections are examined, they tell not only the truth, but the *whole* truth ; not only the present condition, but the past history of the case. It is precisely such cases as this that merit and reward the greatest amount of study ; and it is only when careful clinical and microscopical studies go hand in hand, that the science of pathology is in reality greatly benefited.

ARTICLE VI.

CASES.

By R. L. REA, M.D., CHICAGO.

Mrs. M——, aged ——, very corpulent ; suffered with double hernia sixteen years ago. They were frequently reduced. Trusses worn. The left side was finally cured, but the right at last became irreducible, and remained so for several years, and gave no trouble.

On the night of March 8th, she was taken suddenly with a pain about the region of the rupture, and extend-

ing over the abdomen, which she supposed resulted from unusual diet she had taken for supper. Dr. Tomboecken, her family physician, was called, and detecting the difficulty, made faithful efforts at reduction, without success, the symptoms gradually passing into the well-defined ones of strangulation. I was called in consultation with Dr. T. on the ninth, when the Doctor's fruitless efforts were repeated, varied by position, etc.

Satisfied that further attempts were worse than wasted time, at the Doctor's request I operated.

The tumor, pyriform, about the size of an ordinary fist, lay obliquely from above, down and inwards, the narrow end terminating at the position of the internal abdominal ring, and the large end lying over the situation of the external ring, the whole in position over the inguinal canal. I made my incisions in the usual manner for inguinal hernia, and opening the sac, passed my finger toward the internal abdominal ring—the supposed seat of the stricture—to find it end in a cul de sac. Reversing the direction of my finger for a direct inguinal hernia, I found a similar condition. It then seemed certain that the kind of hernia had been mistaken, which exploration confirmed. That it was a femoral hernia, which, escaping as usual, had, after turning upward after its escape through the saphenous opening, as it further developed in size, ascended and arranged itself in the manner I have described. The hernia was incarcerated, and though I relieved the stricture, the lighted inflammation proved fatal.

The peculiarity and interest of the case centre in the fact of the perfect counterfeit of one form of hernia by another—in this case of little practical use, but in others, capable of reduction, of inestimable value.

The great obesity of the patient added much to the embarrassment of the diagnosis.

Maggie S—, Irish servant, aged 20 ; light complexion, medium sized ; always healthy, without any peculiarity perceptible in her organization ; has menstruated

regularly since she was fourteen. She began to menstruate December 28th, and on Monday morning, the 30th, went through a rain storm some distance from a relative's, where she had stopped over night, to her place, getting her feet and clothing thoroughly wet. Her menses ceased, and she felt badly during the day. She consulted me at my office, on Thursday, Jan. 2, for a "bleeding from her chest," as she expressed it, and supposing her diagnosis of hemoptysis correct, I had her remove her clothing in order to examine her lungs, when the nature of her bleeding from her chest was manifest as vicarious menstruation from the mammary glands; her chemise over both breasts being thoroughly stained, amounting, as I should judge, to two ounces. She stated that, ceasing on Monday, the menses appeared on Tuesday from the nipples, continuing there Wednesday, and resuming their normal direction on Thursday and ceasing Friday as they did, with no seeming interference with health or leaving any symptoms requiring treatment. She was alarmed at the mammary discharge, under the impression that there was hæmorrhage of the lungs, and hence consulted me. The discharge had dried on her clothing, and hence I cannot give an opinion as to its quality.

The subsequent month she menstruated regularly and naturally, but in February had a return of the December abnormality, which passed over in the same way and without treatment.

ARTICLE VII.

CASE OF FOREIGN BODY IN ORBIT.

By M. G. SLOAN, M.D., DELMAR, IA.

The history of this case is given for publication both on account of its comparative rarity, and with a desire to have the statistics of this class of cases kept as complete as possible.

A. W., aged 23; married; previous health very fair. Met with the below described injury December 14th, 1874, at about 7 P. M. Saw him about three hours afterward. The history of the injury is as follows: In leading a horse through a pair of bars he stumbled and fell prone on the ground, which was thickly studded with weed stubble. He stated that he was conscious of having received some sort of an injury, but could hardly tell, at the time, what its nature was. He walked and crawled to his house, a distance of five or six rods.

On my arrival, found the patient sensible, and suffering very acutely with pain, which extended over the whole head. An incised wound, about five-sixteenths of an inch in length, was visible just above the inner canthus of the right eye. There had been only slight hæmorrhage from the wound. Pulse 60, full and regular. Patient had had a severe chill about an hour before my arrival, and had vomited twice.

On probing the wound, a foreign body was discovered at a depth of about three-quarters of an inch. This was seized with the forceps, and slowly and carefully extracted. It proved to be a part of the circumference of an ordinary weed. Another piece was then laid hold of, and with difficulty extracted. These two pieces, when laid together, almost completed the circumference of the weed, and each piece was of about the same length, viz., nearly one inch. The ends which had looked toward the brain were of such an appearance as to make it seem probable that they had been broken from another segment of weed, which was still imbedded deep in the orbit, or, more likely, in the brain. However, after careful probing, nothing more could be discovered. Cold compresses were ordered to head and eye. A purgative dose of sulphate of magnesia given. Warmth applied to extremities. A full dose of morphia administered, and gr. xxx of bromide of potassium ordered to be given every three hours. Perfect quietude enjoined on friends.

On the next day, the 15th, the patient was visited by

my partner, Dr. O. E. Deeds, and myself. (We both attended the case to the end.) Pulse about the same as on previous day. Respiration normal; still complaining of severe pain all over the head, and a sense of fullness and throbbing about the orbit.

I have full notes of this case, but will not occupy your space with them.

Symptoms of cephalic inflammation gradually came on.

On the fourth day after the injury, another small piece of weed was discovered in the wound and extracted. It just completed the circumference of the segment of weed already removed. The diameter of the foreign body was five-sixteenths of an inch.

At this time some delirium was observable, and a tendency to coma. There was slight exophthalmos.

About this time, Dr. G. W. Van Zant, of Charlotte, saw the case with my partner and myself, in consultation. He recommended that the present course of treatment be continued, and gave an unfavorable prognosis.

On the fifth day two more pieces of weed were seized and withdrawn. The inner ends of these showed the smooth cut made by the scythe, in mowing down the weeds. These two pieces, when placed together, formed about one-half the circumference of the deeper segment of the weed. The remainder could be felt with the probe, but was too far from the surface to be reached safely. The probe was introduced by the side of this to a depth of two and a half inches, and met with no obstruction. By measurement on a skull, we found that a stick of that length introduced into the orbit would necessarily penetrate the brain.

On the seventh day after the injury, Dr. A. W. Morgan, of DeWitt, was present in consultation. He recommended no change in the course we were pursuing in the case, and also gave an unfavorable prognosis. The patient remained in a comatose condition from this time until December 29th, or the fifteenth day, when we succeeded in

removing the remainder of the foreign substance. After this, the coma increased ; there was carphologia, involuntary discharges, and muttering delirium. Death occurred January 1st, 1875. The wound discharged pus freely from the first. Stimulants, beef tea, etc., were given as soon as the symptoms indicated failure of the vital powers.

Post mortem refused.

Progress in Medical Sciences.

ARTICLE I.

PROGRESS OF OBSTETRICS.

By E. WARREN SAWYER, M.D.,

LECTURER ON OBSTETRICS, RUSH MEDICAL COLLEGE, CHICAGO.

MANUAL DILATATION OF THE OS UTERI.

In the Boston Medical and Surgical Journal, Feb. 4, Dr. Sinclair has called attention to this mode of dilating the mouth of the uterus in the report of a series of cases in which the hand only was used. Nine cases in all are mentioned : "One of convulsions at the seventh month, three of convulsions at the eighth month, two of placenta prævia at the eighth month, one of uterine hæmorrhage at the fifth month, one of accidental hæmorrhage in the ninth month, and one of persistent vomiting at the seventh month." In all of which it was decided to induce premature expulsion of the fœtus.

The writer says, that "wherever a sponge tent or rubber bag can be inserted, the finger can be introduced." When a single finger has opened the cervix all it is capable of, a second may be added to this, and then a third, and fourth and thumb, and then the hand is shaped into a wedge which may be gently insinuated through the cervix into the cavity of the body. In the cases re-

ported, from fifteen minutes to an hour and a half was required to complete the dilatation.

In the *Traite complet de l'art des accouchemens*, Paris, 1833, Velpeau has spoken of dilatation of the cervix with the fingers, and says that instrumental dilatation is unnecessary; further, if the neck is the seat of disease, as of scirrhus, it is useless to attempt this method.

In three of Dr. Sinclair's cases the patient was anæsthetized during the operation; in *all* instances it seems that ether would facilitate the dilatation—at any rate, ether should be given to relieve the pain incident to the introduction of the hand into the vagina, which is frequently an agonizing operation.

INTRA-UTERINE AMPUTATION.

At a recent meeting of the Dublin Obstetrical Society, Dr. Macan gave another instance of this unusual occurrence. In this case, the boy was born at term and weighed 6lbs., 12 oz. The amputation had taken place through the left forearm, just below the insertion of the biceps. The amputated limb was not found. There was a cicatrix on the stump, which had evidently been a long time healed; just beneath this, but not adherent, the bone was felt. The mother was a healthy young woman who had given birth to five well formed children previously; nothing unusual was observed during this pregnancy.

CONGENITAL DEFORMITIES.

In a recent lecture at Harvard, (Boston Med. and Surg. Journal, April 22,) Dr. Buckingham said: "Concerning what are usually called mother-marks, the result of the so-called longings, or of frights during pregnancy, I assure you that I never yet saw one when I had asked, previous to the delivery, if anything of the kind was anticipated. For years it was my habit to ask the question before labor began, 'if any marks were expected.' Never but in *one* instance did I have an answer in the affirmative which was followed by any appearance like

that which was expected. The case was this : Mrs. — said to me, that when about six months pregnant, while she was at the theatre, a man upon the stage was apparently shot just above the nose, and the blood flowed from the spot. She knew that her child was marked by it. To my astonishment, when the baby was born, there was a red spot covering the lower part of the forehead, between the eyes and down to the nose. Of course, I had no explanation to make. On the following day, however, the patient's mother relieved me very much when she came into the room, uncovered the little one to look at it, and exclaimed, ' Why, Eliza, she's got just such a mark as you had when you were born.' It was an inherited spot, and, like very many of these marks, faded away as the child grew older."

NOTE.

Much comment has been recently elicited on account of a fatal case in England, of rupture of the vagina, which, from a professional standpoint, was, to say the least, remarkable. The facts are briefly these : A Mr. Peacock attended a woman in confinement ; after the labor was over, he found a coil of intestines prolapsed through the vagina which he cut off, placed in a chamber and afterwards in a privy. The woman died two hours after the operation. The coroner directed an examination of the body to be made, when it was discovered that a rent was made through the vagina, large enough to admit the hand, and that fifteen feet of the large and small intestines and mesentery were wanting. At the inquest, Dr. Barnes testified favorably to the defendant. The jury concluded that there was no evidence of "gross ignorance, want of skill, or gross inattention," and returned the verdict : "That the deceased died from the effect of an escape of intestines, consequent upon spontaneous rupture of the vagina during her confinement." Despite this, however, on behalf of the husband, Mr.

Peacock was indicted for manslaughter, tried and convicted, and is now serving out a term of six months imprisonment to which the court sentenced him. The *Obstetrical Journal* says of this unfortunate case, "From the excellent character, both moral and professional, which Mr. Peacock received, there appeared to be no grounds for believing that the laceration which ended so disastrously was caused by any want of care or skill."

E. W. S.

Reports of Societies.

THE ILLINOIS STATE MEDICAL SOCIETY.

Twenty-fifth Annual Meeting, May 18, 1875.

The 25th annual meeting of the Illinois State Medical Society was held in the Conservatory of Music, at Jacksonville, Ill., commencing May 18th, a large number of delegates being in attendance. The meeting was called to order by Dr. David Prince, Chairman of the Committee of Arrangements, who welcomed the members to the city of Jacksonville.

Dr. J. H. Hollister, President of the Society, responded in a few appropriate remarks, after which the programme of exercises was announced by Dr. Prince.

On motion of Dr. T. D. Fitch, the Secretary, Dr. W. P. Pierce was chosen Treasurer *pro tem.* in the absence of Dr. Quine, the regular Treasurer.

On motion of Dr. Prince, the assessment was fixed at three dollars per member.

Dr. Prince also moved, that an initiation fee once paid should not be demanded again after a period of absence on the part of any member. After some discussion, the motion was carried. Subsequently, on Dr. Pierce asking for information as to whether, if a member had paid an initiation fee twenty years ago, and had been absent the

intervening years, he was still to be considered a member, Dr. Fitch moved a reconsideration of the motion of Dr. Prince, which was carried—ayes 16, noes 10. On motion of Dr. Fitch, the order was so amended that a member loses his membership if he does not attend the meetings of the Society or pay his dues for a period of five years.

The Standing Committees were next called in their order, and the time fixed to hear such reports as were ready.

Dr. Whitmire, Chairman of the Committee on Nervous Diseases, announced that he had requested Dr. J. S. Jewell to prepare the report, and that he had prepared one.

The Secretary announced that Dr. Charles G. Smith, of Chicago, Chairman of the Committee on Dermatology, had not prepared a report, but desired to be continued on the committee another year. The request was granted.

A report of Dr. J. N. Niglas, of Peoria, on Hernia, was referred to the Committee on Surgery.

Dr. J. W. Freer announced a volunteer paper on the subject of Transfusion of the Blood.

Dr. Hoyt, of Bloomington, announced a paper prepared by Dr. E. W. Gray, on Small-pox, together with a series of resolutions on vaccination, which he asked the Society to adopt. It was referred to the Committee of Arrangements.

Dr. Rumbold, of St. Louis, announced a volunteer paper on "The Functions of the Uvula," which was ordered to be read at the convenience of the Society.

The Secretary announced that Prof. S. Curtiss, of Chicago, had prepared a paper on "The Anatomy of the Serous Membranes as affecting their Pathology." It was ordered to be read.

A communication was read from the Esculapian Medical Society, requesting that Dr. William Massey's essay on Insanity be read before the Illinois State Society. That gentleman was accordingly invited to read his paper, and this was the first paper read. It was followed by the reading of Dr. J. B. Walker's essay on Scarlatina, which was referred to the Committee on Publication.

The next thing was the reading of the paper of Dr. Curtiss on the Anatomy of the Serous Membranes. After some discussion of the subject, by Drs. J. W. Freer, Curtiss and Worrell, the paper was referred to the Committee on Publication.

On motion of Dr. Worrell, the paper of Dr. Massey was referred to the Committee on Publication.

In the afternoon, at 2 o'clock, the Association visited the Deaf and Dumb Asylum, and the Institution for Feeble Minded Children, spending the time there until 5 o'clock.

At 7½ o'clock in the evening the Society reassembled, and Dr. J. O. Hamilton, of Jerseyville, read a paper on the Diseases of Children, which was followed by one on the same subject, prepared by Dr. C. W. Earle, of Chicago, read by the Secretary.

After a pretty full discussion of the papers by Drs. E. F. Ingalls, Hamilton, Steele, Fitch, J. H. Mosher, Slater, Cowen, Worrell, Rumbold, and R. C. Hamill, the papers were referred to the Committee on Publication.

Dr. Rumbold, of St. Louis, read his paper on "The Functions of the Uvula," which was referred to the Committee on Publication.

Dr. David Prince next delivered an address on the use of electricity in therapeutics and surgery, accompanying the address by experiments with electrical machines. He was requested to prepare a paper on the subject for publication in the Transactions.

On motion of Dr. Freer, the proposition of Prof. Sanders, of the Conservatory of Music, to entertain the Society with a concert, was accepted, and the time fixed for Wednesday evening.

Adjourned.

— WEDNESDAY, MAY 19.

The Society was called to order at 8 o'clock. Dr. J. W. Freer read his paper on Transfusion, which was referred to the Committee on Publication.

Dr. T. D. Fitch announced, that, in connection with the report of the Committee on Obstetrics, he would present some remarks on several new gynæcological instruments.

A recess of ten minutes was then taken, to allow of the selection of a Nominating Committee.

After the recess, Dr. E. B. Cooke submitted his report on Practical Medicine, which was followed by a paper by Dr. R. C. Hamill on the Treatment of Rheumatism by *Phytolacca* and *Guiaca*. The papers were discussed by Drs. Steele, Cooke, Birney, Herriott, Wright, Hay, and Edgar, of St. Louis, and were referred to the Committee on Publication.

Dr. E. Powell next read the report of the Committee on Surgery, which was followed by one on Hernia by Dr. E. L. Herriott.

Dr. David Prince exhibited an instrument for taking up the stitch in operations on soft palate and in skin planting.

Adjourned.

In the afternoon, the Society met at 2 o'clock, to witness the operation of transfusion performed upon a dog, by Dr. J. W. Freer, aided by Drs. E. Powell and Hay.

At the conclusion of this, the members took the street cars, and visited the State Hospital for the Insane, and the Asylum for the Blind.

In the evening, the President, Dr. J. H. Hollister, delivered his annual address before a large audience, the platform being occupied by the ex-Presidents present, Drs. Hamilton, McFarland, Worrell, Steele, Haller, and Prince. At the conclusion of the address, Dr. Prince offered a resolution, expressing the thanks of the citizens of Jacksonville for the pleasure they had in listening to the eloquent and scholarly address of the President. The resolution was unanimously adopted. The remainder of the evening was devoted to a concert given by the Illinois Conservatory of Music.

THURSDAY, MAY 20.

The Association reassembled at 8 A. M.

The paper of Dr. Niglas on Hernia, was referred to the Committee on Publication.

Dr. W. P. Pierce read a paper on Fractures, which was referred to the same committee.

Dr. Haller, chairman of the Nominating Committee, submitted his report, which, after some discussion and amendment by the committee, was presented as follows:

Report of the Nominating Committee which was adopted.

OFFICERS FOR THE ENSUING YEAR.

President.

THOMAS D. WASHBURN, M.D., Hillsboro.

1st Vice-President.

J. L. WHITE, M.D., Bloomington.

2nd Vice-President.

JOHN WRIGHT, M.D., Clinton.

Treasurer.

JOHN H. HOLLISTER, M.D., Chicago.

Permanent Secretary.

T. DAVIS FITCH, M.D., Chicago.

Assistant Secretary.

C. B. JOHNSON, M.D., Tolono.

STANDING COMMITTEES.

Board of Censors.

E. WENGER, M.D., Gilman, *Chairman.*

E. INGALS, M.D., Chicago.

E. S. HERRIOTT, M.D., Grafton.

Committee of Arrangements.

S. H. BIRNEY, M.D., Urbana, *Chairman.*

A. F. DARRAH, M.D.

J. T. PEARMAN, M.D., Champaign.

Practical Medicine.

WILLIAM MASSEY, M.D., Grandview, *Chairman.*

D. L. JEWETT, M.D., Watseka.

I. W. FINK, M.D., Hillsboro.

Committee on Surgery.

MOSES GUNN, M.D., Chicago, *Chairman.*

A. C. RANKIN, Loda.

JOHN G. HAYS, Paris.

Committee on Obstetrics.

M. W. WALTON, M.D., Ridott, *Chairman.*

C. GOODBRAKE, M.D., Clinton.

D. E. FOOTE, M.D., Belvidere.

*Drugs and Medicines.*J. H. ETHERIDGE, Chicago, *Chairman.*

T. J. PITNER, M.D., Jacksonville.

H. H. HOOD, Litchfield.

Necrology.

G. W. ALBIN, M.D., Neoga.

WILLIAM CHAMBERS, M.D., Charleston.

J. N. NIGLAS, M.D., Peoria.

Ophthalmology.

E. L. HOLMES, M.D., Chicago.

Otology.

F. C. HOTZ, M.D., Chicago.

SPECIAL COMMITTEES.

Diseases of Children.

J. S. WILLIAMS, M.D., Otterville.

Medical Jurisprudence.

M. A. McCLELLAN, M.D., Knoxville.

Dermatology,

J. NEVINS HYDE, M.D., Chicago.

Progress in Physiology.

SARAH HACKETT STEVENSON, M.D., Chicago.

Idiocy.

O. T. WILBUR, M.D., Jacksonville.

Neurology.

WALTER HAY, M.D., Chicago.

Gynecology.

A. REEVES JACKSON, M.D., Chicago.

Hygiene.

JEHU LITTLE, M.D., Leroy.

Diagnosis and Extirpation of Tumors.

W. L. GOODELL, M.D., Effingham.

Empiricism.

J. F. TODD, M.D., Galva.

Prudence in the Administration of Therapeutic Agents.

E. INGALS, M.D., Chicago.

Uterine Displacements.

T. D. FITCH, M.D., Chicago.

Staphylocraphy.

DAVID PRINCE, M.D., Jacksonville.

Electro-Therapeutics.

PLYM. S. HAYES, Chicago.

Place of meeting, Urbana, Champaign County.

The report was adopted.

Dr. T. D. Fitch submitted some new gynæcological instruments, with explanations. A discussion followed, which was participated in by Drs. Cooke, Edgar, of St. Louis, Frazier, and Boal.

Dr. David Prince also exhibited several similar instruments, with explanations.

Dr. Pierce read an abstract of a report on Surgery by Dr. Rood, of Lemont. The report was referred to the Publishing Committee.

Dr. E. Ingals, chairman of the committee, submitted his report on Necrology. It included memoirs of Drs. G. W. Young, of Aurora, and J. V. Z. Blaney, of Chicago.

The report on Nervous Diseases, by Dr. J. S. Jewell, was next received, and referred to the Publication Committee.

Dr. Prince declining to serve on the Committee on Galvano-Therapeutics for next year, his resignation was accepted, and Dr. William Hay, of Chicago, was appointed to prepare a paper on Electro-Therapeutics.

Resolutions were adopted requesting Congress to place the medical corps of the Army of the United States on an equal footing with the officers of other army corps.

Dr. T. D. Fitch read a report prepared by Dr. H. A. Johnson, of Chicago, on Phthisis, which was referred to the Committee on Publication.

The Secretary exhibited an improved stethoscope, which Dr. Curtiss explained.

The resolutions prepared by Dr. E. W. Gray, of Bloomington, on the regulation by a State enactment of the subject of vaccination in all public schools, asylums, etc., were read and adopted.

On motion of Dr. Haller, Dr. Prince was appointed a Special Committee on Staphyloraphy.

The Secretary submitted a report of the members present, and the Society adjourned until 2½ o'clock in the afternoon.

Society met at 2½ o'clock, as per adjournment.

The Treasurer's Report was read and accepted.

Also, the Secretary's Report, and the report of the Committee on Publication.

On motion of Dr. Freer, the Secretary was voted a salary of \$100.

After some discussion in regard to the delay in printing the Transactions, Dr. Hay submitted the following, which was adopted :

Resolved, That at the next, and at all subsequent meetings, all reports of committees, and other papers designed for publication in the Transactions of this Society, be furnished in form ready for publication, and be placed at the disposal of the Publication Committee.

The following named persons were appointed delegates to the next session of the American Medical Association :

Delegates to the American Medical Association.

S. C. Plumm, M.D., Rock Island.	A. T. Darrah, M.D., Urbana.
Walter Hay, M.D., Chicago.	M. W. Walton, M.D., Ridott.
J. F. Todd, M.D., Galva.	M. Sheppard, M.D., Pason.
J. B. Rood, M.D., Lemont.	C. Goodbrake, M.D., Clinton.
D. E. Foote, M.D., Belvidere.	J. O. Hamilton, M.D., Jerseyville.
F. B. Haller, M.D., Vandalia.	Lester Curtis, M.D., Chicago.
J. W. Freer, M.D., Chicago.	T. D. Fitch, M.D., "
J. H. Hollister, M.D., "	E. R. Willard, M.D., Wilmington.
Moses Gunn, M.D., "	W. A. Haskell, M.D., Edwardsville.
W. P. Pierce, M.D., Lemont.	Robert Boal, M.D., Peoria.
N. S. Reed, M.D., Chandlerville.	C. T. Wilbur, M.D., Jacksonville.
H. B. Buck, M.D., Springfield.	J. M. Steele, M.D., Grandview.
Thomas J. Whitten, M.D., Irving.	L. Clark, M.D., Rockford.
Wm. L. Goodell, M.D., Effingham.	O. Everett, M.D., Dixon.
David Prince, M.D., Jacksonville.	T. D. Washburn, M.D., Hillsboro.
G. Wheeler Jones, M.D., Danville.	Wm. A. Elder, M.D., Bloomington.
J. Adams Allen, M.D., Chicago.	C. Paul Simon, M.D., Chicago.
E. P. Cook, M.D., Mendota.	E. Ingals, M.D., "

Iowa State Medical Society.

Walter Hay, M.D., Chicago. T. D. Fitch, M.D., Chicago.

Missouri State Medical Society.

F. B. Haller, M.D., Vandalia.

Indiana State Medical Society.

W. W. McMann, M.D., Gardner.

Minnesota State Medical Society.

S. C. Plumm, M.D., Rock Island.

New York State Medical Society.

W. P. Pierce, M.D., Lemont.

Nominating Committee.

J. W. Freer, M.D., Cook County.	D. L. Wood, M.D., La Salle County.
J. H. Mosin, M.D., Whiteside "	M. W. Seaman, M.D., Macoupin "
D. E. Foote, M.D., Boone "	W. H. Haskell, M.D., Madison "
T. N. Stewart, M.D., Scott "	M. W. Walton, M.D., Stephenson "
F. B. Haller, M.D., Fayette "	Sam'l Mileham, M.D., Adams "
E. Wenger, M.D., Iroquois "	P. H. Garretson, M.D., McDono' "
D. Lichty, M.D., Ogle "	T. J. Maxwell, M.D., Henderson "
L. B. Slater, M.D., Christian "	G. W. Albin, M.D., Cumberland "
A. P. Tenney, M.D., McLean "	W. L. Goodell, M.D., Effingham "
Fre'l. Cole, M.D., Woodford "	A. T. Darrah, M.D., Champaign "
J. V. Frazin, M.D., Mercer "	W. G. Cochran, M.D., De Witt "
J. N. Allen, M.D., Brown "	C. T. Wilbur, M.D., Morgan "
J. L. Hays, M.D., Edgar "	Geo. W. Wright, M.D., Fulton "
D. H. Alvis, M.D., Henry "	J. G. McKinney, M.D., Pike "
J. S. Williams, M.D., Jersey "	T. H. Whitten, M.D., Montgomery
W. H. Veatch, M.D., Greene "	County.

A resolution expressive of the gratification of the members with their treatment by the citizens of Jacksonville, also, a resolution thanking the President, Dr. Hollister, for the skill and wisdom he had displayed as presiding officer, were unanimously adopted; and after a few farewell words from the President, the Society adjourned.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, May 10, 1875.

(Reported by E. WARREN SAWYER, M.D.)

The Society met at the Grand Pacific Hotel. The President, Dr. Bartlett, in the chair.

This being the annual meeting, the yearly report of the Secretary and Treasurer was called for and read.

The Society then proceeded to the election of officers for the ensuing year, with the following result:

President, Thomas Bevan, M.D.; Vice-President, R. C. Hamill, M.D.; Secretary and Treasurer, Ralph E. Starkweather, M.D.; Recorder, E. Warren Sawyer, M.D.; Censors, Drs. Bartlett, Hyde, and Jackson.

Upon retiring the President delivered the annual address, the publication of which was called for by the Society. It will appear shortly.

REPORT OF THE SECRETARY OF THE CHICAGO SOCIETY OF PHYSICIANS
AND SURGEONS, FOR THE YEAR ENDING MAY 10, 1875.

Mr. President and Gentlemen:—

I have the honor to submit herewith the Annual Report of the Secretary of the Society for the third year since its organization.

On the 11th of May, 1874, there were fifty-nine members in active co-operation with the Society, and two non-residents, whose names were carried on the roll. Since that date three have removed from the city, and twenty-one have united with us. This leaves eighty-two names of members on the active list. One has been by vote declared an associate member. Deducting this name, with those who have ceased to reside here, from the entire number, we have seventy-eight names of physicians, in and about the city, who are actively interested in the work of the Society.

We have held twenty-three regular meetings during the year, and one special, making an average of two for each month, with a total attendance of 479, the average attendance upon each meeting being therefore nineteen.

The following reports have been made during the year just closed :

1. On the Absorption Bands of Blood in the Spectroscope.
2. On the Relative Mortality of Surgical Operations in the United States and other Countries.
3. On the Relation of Alcoholism and Sexual Diseases to Climate.
4. On the *Ætiology* and Pathology of Cholera Infantum.
5. On Asiatic Cholera : being a detailed account of its ingress and extension through portions of the United States during the summer of 1873.
6. On a New Method of Introducing Barnes' Dilators.
7. On the Action of Hydrate of Chloral upon the Blood.
8. On Pneumatic Aspiration : its methods and instruments.
9. On General Therapeutics.
10. On Carcinomatous and Scirrhus Neoplasms, (with microscopical illustrations).
11. On the Organic Alkaloids of the Cinchona Barks.

The following papers have been read before the Society during the year :

1. On the Microscopy of the Brains of the Insane, (with illustrative drawings).
2. On the Use of Podophyllin in Acute Rheumatism, (pub. Am. Jour. of Med. Sci.)
3. On the Eucalyptus Globulus.
4. On the Relative Value of Thermometers for medicinal purposes offered to the Profession.
5. On Puerperal Convulsions, (with illustrative case).
6. On the Management of the Third Stage of Labor.
7. On the Employment of Phytolacca Decordia and Guaiacum in Rheumatic Diseases.
8. On the Action of Salicylic Acid.

The following translations of papers by foreign authors were also presented and read :

1. On the Therapeutic Value of Ipecac in Pulmonary Sweats.
2. On the Examination of the Mucous Membrane of the Uterus, (with illustrative microscopic drawings).

The following cases have been reported :

1. Case of Double Vagina and Uterus, with successful delivery of living child.
2. Case of Chronic Pyelitis.
3. Case of Subacute Meningitis.
4. Case of Amenorrhœa.
5. Case of Dysmenorrhœa, relieved by topical application of Faradic current.
6. Cases of Relapsing Fevers.
7. Cases of Obscure Neuroses.
8. Case of Retained Menses from Vaginal Constriction, successfully relieved by surgical interference.
9. Cases from Clinic for Diseases of Heart and Lungs—South Side Dispensary.
10. Cases of Subinvolution of Uterus, relieved by topical application of nitric acid.—In the "*Wom. Hosp., State of Ill.*"
11. Case of Retention of Placenta during twelve days.
12. Case of Suppurative Pleuritis, relieved by aspiration.
13. Two Cases of Epilepsy successfully treated.
14. Case of Scirrhus of the Stomach, with details of post-mortem appearances and microscopic pathology, (illustrated by stained sections under the microscope).
15. Cases of Uterine Inertia, relieved by actæa racemosa.

16. Case of Aspiration of the Pericardial Sac—partial relief—death—and exhibition of specimen.

17. Two Cases of Fracture of Arm and Leg—(St. Luke's Hosp.)

18. Case of Multilocular Ovarian Cyst, successfully treated by electricity and acupuncture.

19. Fatal Case of Corroding Ulcer of the Uterus.

20. Case of Traumatic Epileptiform Convulsions.

21. Case of Variola, aborted by employment of sulphite of soda and carbolic acid.

22. Four Cases of Land Scurvy, successfully treated in Cook County Hospital.

23. Two Cases of Uterine Fibroid Tumors, relieved by hypodermic injection of ergotine.

24. Case of Cerebro-spinal Meningitis Simulating Hydrophobia.

25. Case of Successful Removal of Colloid Multilocular Ovarian Tumor, followed by death; with chart of pulse and temperature record, and exhibition of specimen.

26. History of a singular Case of Catalepsy, treated in Mercy Hospital.

The following specimens have been presented during the year—in addition to those already mentioned :

1. Nine calculi, removed from patient at a single operation.
2. Horn, removed from the forehead of a woman 55 years old.
3. Portable Electro-Faradic Machines, with chloride of silver battery.

4. Tumor of Dentine.

5. Cast of an anencephalous monster.

6. A novel inhaler for anæsthetic purposes.

During the year, Art. I of the Constitution has been amended so as to exclude candidates for membership who have not been in actual practice for two years, and who may be interested in the sale of medicines and surgical appliances. Two sections have also been added to Article IV, providing for the election of Associate and Honorary Members; while a new By-Law has been added, restricting the privilege of each member to the nomination of but one candidate during the year.

Two important resolutions have been passed, one recommending the delegates of the Society to both the State and National

Medical Associations to urge upon those bodies the memorializing Congress with reference to the remission of the duties on imported scientific works ; the other fixing the Annual Meeting as the appropriate date for the appointment or election of such delegates.

In accordance with a resolution of the Society, passed Dec. 28, 1874, a committee has been appointed to wait upon the President of the Society, and, in accordance with his expressed wish, examine his specimens of the fungus from the Mississippi river ague bottoms, and report in full to the Society upon the same, as well as upon the paper prepared and read by Dr. Bartlett, on the 10th of April, 1873. I am informed by the chairman of the committee, that they have waited upon Dr. Bartlett, and arranged upon a date for the investigation proposed.

The protracted work, and subsequent report of the committee on the relations between physicians and pharmacists are fresh in your recollection, and require no word of comment from one who co-operated with them in detail. It is sufficient to note that the result obtained was all that any reasonable individual could have anticipated at the outset of the inquiry. It awakened a sentiment in the minds of many men connected with the two professions, which led them to define for themselves a distinct boundary line between what should and what should not be permitted in the light of the highest ethics.

Nor is it necessary to review the part taken by this Society in the banquet extended by the Medical Profession of the city to the State Association, at the date of its last annual convention in our midst. The large representation of the Society in the number that enjoyed the festivities of that occasion, and the able address of our President, are remembered by many who are gathered here to-day. Were the recollection wanting, the details published in the Transactions of the Medical Society of the State of Illinois for 1874, would vividly recall the occasion. It is proper to add that that was the largest social gathering of the representatives of the Medical Profession of the city of Chicago that has ever occurred, and so great was the harmony and good feeling fostered by the amenities of the banquet, that not a few have felt it would be a desirable end accomplished if some such social reunion could occur annually.

The thanks of the Society during the year concluded are due to the editors of the two Medical Journals of Chicago for their kindness in publishing fully all the transactions and papers of the Society that have been submitted to them. The resolution passed Nov. 23, 1874, requiring that thereafter only the strictly scientific and literary transactions of the association should be spread before the public—reserving for the records, the executive and other acts—have improved the character of the published material.

In this connection it is proper to state, that for the accuracy and regularity with which all such matter has been prepared for publication, the Society itself, and the editors of the Medical Journals no less, are equally indebted to the faithfulness of the Reporter for the year, Dr. R. E. Starkweather. When it is considered that he has been under the necessity, during the entire year, of preparing duplicates of each report of the transactions—one for each Journal—and that these reports have frequently embodied long debates and abstracts of extended papers and verbal reports, an idea may be had of the actual labor involved in the discharge of his duties. How efficiently he has performed his task you have been in position to determine, who have examined the weekly and monthly exhibits of the medical press.

To Dr. F. H. Davis, the editor and publisher of the Medical Examiner, the Society is indebted for a bound copy of all the papers and transactions published in that Journal during the year 1874. These were collected by Dr. Davis himself, from the mass of material which was at his disposal, and bound in this convenient shape for the purpose of presenting them to the Society.

In concluding this resume of the work accomplished during the past year, it will be apparent, even upon a hasty glance over the field, that the character and amount of original investigation which has been encouraged in our midst, are sufficiently gratifying. It is also sufficient to suggest the conclusion, that he who has lost the opportunities afforded here for actual advance in the directions to which the reports have pointed, has failed to secure the absolute advantages provided by the Society. If some there be of this class, they have but one consolation left them—and that is, the ability to offset this loss by equally solid

advantages gained elsewhere. The species of moralizing which is suggested by the arrival at such anniversaries as the present, is at once natural and necessary. The question comes home to each individual upon such occasions, "Have I, in a satisfactory manner, discharged my duties, not to the medical society, but to myself, during the period which has elapsed?"

Now just here comes in the operation of a principle, which is clearly admitted by all men and yet which they are quick to lose sight of. Perhaps, in consideration of the fact that, to-day after serving in the capacity of Secretary for three years, I resign my office to the hands of another, I may be pardoned for a representation of it.

It is a common enough error to conclude that the benefit to be derived from an association of this kind, is obtainable by attendance upon its meetings, listening to the papers read and the discussions which result, and digesting the accumulated information so as to make it the property of the hearer. It is undeniably true that benefit is to be gained by this process, but so inferior is it to the larger improvement of another kind placed within the reach of all, that the end would not actually justify the expenditure of the time and trouble necessary to secure it.

The most valuable of the advantages afforded by a medical society are certainly *not* those resulting from the information to be acquired at its meetings. For the periodicals and permanent literature which provide the student with the fullest details upon every question, are accessible to each in the office and study. What extempore speaker among us can furnish such instructive pabulum as Murchison, Broadabent, Biesiodecki or Nelaton! What essayist of our number can compare in brilliancy and depth with Hutchinson, Bennet, Bernutz or Virchow! Shall we then abandon our efforts and cease to unite ourselves in the bonds of medical organizations?

The answer given by the thoughtful man will be a decided negative, and his reason will be this: The greatest benefit derivable from these associations accrues to the speaker, the writer, the exhibitor—and *not* to the hearer. It is he, who, having observed or amassed facts, comes to others with his treasure, and toils in the effort—it is he, I say, who obtains the great benefit of the deed, not he merely who receives his share of the treasure.

It is not the *receiving* which makes us richer, it is the giving. He who brings me a fact or an idea, is richer than I. It is the gladiator in the arena, whose muscles are hardened, whose courage is heightened, whose brain becomes cool and clear—not the listless or interested spectator on the benches.

The American poet, Lowell, has illustrated the truth of this universal law in one of the most finished of his productions. In the "Legend of Sir Lawful," the knight goes forth in quest of the Holy Grail, but returns at the conclusion of a vain and weary pilgrimage, utterly disheartened. It is only when he is quite near his home and divides his scanty crust with a miserable beggar, that he is rewarded by discovering the sacred object of his search.

The knight of the helmet, spear and shield has long been succeeded by the man with the microscope, the thermometer and the scalpel. But the latter, no less than the former, will fail to attain the precious end of his researches if he does not divide by the way his crust of truth with his fellows.

That member of this Society who faithfully discharges his duties to his associates during the ensuing year, will assuredly be the wiser and the stronger for the effort.

JAMES NEVINS HYDE.

CHICAGO, May 10, 1875.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, May 24, 1875.

(Reported by E. WARREN SAWYER, M.D.)

Prof. Thomas Bevan, President, in the chair.

Prof. Freer reported a series of experiments made upon dogs, with a view to ascertaining how long blood may be kept and afterwards safely transfused into dogs.

First Experiment.—10 oz. of venous, defibrinated dog's blood, was transfused into another's veins, the blood having stood for seven hours upon ice, but warmed to 95° F. just before the operation. No bad symptoms resulted.

Second Experiment.—8 oz. of arterial blood, which had been exposed for seventeen hours to the temperature of the laboratory, about 65° F., was transfused, with no ill effects.

Third Experiment.—This dog was first bled from the carotid artery till he could bleed no longer, about 20 oz. being let. Fresh blood was transfused, and dog recovered rapidly.

Fourth Experiment.—First bled to insensibility; respiration had ceased, 32 oz. escaping; 10 oz. of blood, which had previously stood upon ice for forty-eight hours, was transfused. Dog was resuscitated, but died seventeen hours afterward. This was an unfavorable subject for the operation, as it was a dog which had been caught up from the street at the moment, and was greatly frightened.

Fifth Experiment.—This dog was first bled 6 oz.; then 7 oz. of blood, which had been on ice for the previous seventy-two hours, was transfused. Dog recovered.

In all instances the blood used was defibrinated immediately after being drawn. With one exception, the blood was brought to 95° F. at the moment of transfusion. In this exceptional instance the blood was accidentally passed into the dog's veins cold, without any bad effect.

Dr. Freer has long been of the opinion that blood was not as highly vitalized as other tissues; he regarded it rather as food in its most highly prepared shape, and ready for assimilation. By transfusion the body can be nourished *direct*, independently of the digestive organs. The indication for this operation will be the threatened inanition of the patient. More people die from inanition than we realize. In pulmonary consumption, for example, the patient rarely dies from asphyxia, and very rarely from hæmorrhage, but from the failure of the digestive organs to furnish assimilable food—in other words, from starvation.

In caries about large joints, the patient ultimately succumbs, because the digestive function has failed long before. By supplying the readily assimilated food, in the operation of transfusion, we give the digestive organs rest; and, in some instances, we may hope for an arrest in the morbid changes, even in so formidable a disease as pulmonary consumption.

In answer to Dr. Starkweather. McDonald's apparatus was used in transfusion.

Answer to Prof. Etheridge. No unsuccessful cases thus far have occurred.

Dr. Simons remarked, that in cases of immediate danger of starvation, small quantities of this blood food might be given, from time to time, just as one would inject hydrate of chloral in the veins, or any other drug.

The President regarded the thought as a most important one; for, in some instances of malignant disease of the digestive tract, which seems alone too slight to cause death, the threatened starvation might be arrested almost indefinitely.

In answer to Dr. Hamill, Dr. Freer said, that if a person should digest no food at all, it will not be necessary to resort to transfusion daily, for the good effects are not so transitory.

Dr. Simons suggested that it would be an interesting fact to determine by experiment, viz., how long a dog could be kept alive by continuous transfusion, with absolutely no food taken into the stomach.

It was moved by Dr. Hyde, and carried, that Prof. Freer be requested to read a more extended paper on the subject, and exhibit apparatus, details of the operation, etc., at some future day.

Dr. Lester Curtis read a paper on the histological structure of the serous membranes, with reference to certain pathological processes which they may be the seat of. The subject was illustrated with diagrams. The writer had been struck by the fact that the effect of inflammation of the serous membrane was quite unlike the effect of that process when the mucous membrane was attacked. An explanation of this disparity was to be found in the structure of these membranes. The epithelial covering of the serous membranes can be separated into two layers, between which coagulable lymph was effused, thus converting the membrane into a true granulating surface, which is always followed by con-

traction. Unlike this, the epithelial covering of the mucous membrane is not thus separable into two layers.

Dr. Henrotin reported the case of a lady who had suffered a scald of the feet about two weeks before. Everything was progressing favorably, the healing nearly completed, when she was seized, while sitting in her chair, with palpitation of the heart and syncope, followed by death in twenty minutes. During life the lady had had frequent attacks of palpitation of the heart and syncope; once a blowing sound was heard on the aortic orifice.

Dr. Hyde reported a case of pityriasis versicolor in a lady, which he felt emboldened to speak of, because two well known physicians of this city had treated her with various drugs in large quantities for liver disease, and finally for kidney trouble. A single warm bath and the local application of sulphate of soda in solution was all that was required.

Dr. Wood mentioned that he had seen thirty cases of this disease in recruits. He had not found it intractable under the use of corrosive sublimate externally.

Dr. Simons spoke of a case in which the hand was passed into the rectum for the purpose of diagnosis. The case was obscure; that of a man who passed masses of fæces through the urethra.

[From the Medical News and Library.]

MEDICAL NEWS.

DOMESTIC INTELLIGENCE.

American Medical Association.—This Association held its twenty-sixth annual meeting at Louisville, Ky., on the 4th, 5th, 6th and 7th of May of this year. The attendance we learn was very large, and the proceedings entirely harmonious.

May 4. The Association was called to order by Dr. E. Richardson, chairman of the Committee of Arrangements, who welcomed the delegates in an eloquent address.

The President, Dr. Bowling, then delivered the annual address ; the subject was Medical Education.

5th. Dr. J. M. Toner, chairman of the Committee to memorialize Congress on the rank of the medical staff of the army, made a report, and offered the following resolutions, which were adopted :

Resolved, That this Association learns with regret that no action was taken by the last Congress upon its recommendation in behalf of the Medical Department of the United States Army, and that we respectfully renew our petition, that Congress will enact such a bill for the benefit of the medical department of the army as will secure to its officers that share of rank and promotion to which we consider they are entitled, and which should be at least fully equal to that enjoyed by any other staff corps, or by the medical corps of any army.

Resolved, That a committee of five be appointed to call the attention of Congress to this subject, and the petitions which were forwarded to the last Congress by the physicians of the United States.

After the transaction of some further miscellaneous business, Prof. Gross, of Philadelphia, read an elaborate paper on Venesection as a Lost Art.

Prof. Austin Flint, chairman of the Committee on Practical Medicine, next read a report on the Medical Discoveries during the Past Year, in which he discussed the subjects of alcoholism, motor centres, new remedial agents, transfusion, and the natural history of crime. The report was referred to the Publishing Committee.

Dr. Toner made a report, suggesting the organization of an international medical association, in which the profession of America should be represented at the meeting in Brussels. Referred to the Committee on Nominations.

6th. Delegates were appointed to represent the Association in the International Medical Association, to be held in Brussels, in September next, and to confer with a committee from the Canadian Medical Association, which is to meet in Halifax, Aug. 5th next, on the subject of holding an international convention of the two associations.

The reports of the Committee of Publication, of the Treasurer, and Librarian, were severally read.

Dr. S. D. Seelye, of Alabama, offered a prize of one hundred dollars for the best essay on Bright's Disease, which was accepted.

Dr. J. Marion Sims, as chairman of the special committee appointed to devise plans for the establishment of the McDowell memorial fund, offered the following preamble and resolutions, which were adopted :

WHEREAS, It is universally acknowledged that the late Ephraim McDowell, of Kentucky, was the originator of ovariectomy ; and

WHEREAS, We believe that proper measures should be instituted to commemorate this great achievement, and do appropriate honor to its author ; therefore

Resolved, That this Association recommend to each of its members, and to the profession generally, to contribute annually such sums as they may think proper until the amount of ten thousand dollars shall be accumulated, which shall be known as the McDowell Memorial Fund, the interest of which shall be devoted to the payment of prizes for the best essays relating to the diseases of the ovaries.

Resolved, That this fund shall be invested by trustees, to be appointed by the Association, and subject to such regulations as it may desire.

Resolved, That this Association shall elect a board of three trustees, whose duty it shall be to carry out the object of these resolutions, and whose term of office shall continue five years.

Resolved, That this Association will leave to the State of Kentucky the grateful privilege of providing a local memorial to the memory of Dr. McDowell.

Prof. Gross made some remarks regarding the justice of Dr. McDowell's claim to be the originator of ovariectomy, and announced that he would subscribe one hundred dollars to the fund.

Prof. Gross announced that it was designed to hold an international medical conference in Philadelphia during the Centennial celebration.

A report was received from the Judicial Council on various matters of ethics, after which Prof. E. M. Moore, of Rochester, N. Y., read an elaborate paper on Transfusion.

Prof. Byford then read a paper on Uterine Fibroids, which was referred to the Publishing Committee.

7th. After the transaction of some miscellaneous business, including the appointment of certain committees, the Nominating Committee reported the following officers for the next year, which nominations were confirmed :

President—J. Marion Sims, M.D., of New York.

Vice-Presidents—First, John D. Jackson, M.D., of Kentucky; second, Samuel Lilly, M.D., of New Jersey; third, N. Pinckney, M.D., of U. S. Navy; fourth, S. D. Seelye, M.D., of Alabama.

Treasurer—Caspar Wister, M.D., of Pennsylvania.

Librarian—Wm. Lee, M.D., of District of Columbia.

Committee on Library—Johnson Eliot, M.D., of District of Columbia.

Assistant Secretary—Richard J. Dunglison, M.D., of Pennsylvania.

Committee of Arrangements—Drs. Wm. Pepper, chairman; Frank Maury, Albert Fricke, A. Hewson, S. W. Gross, William Goodell, and T. M. Drysdale.

Committee on Publication—Drs. F. G. Smith, T. M. Drysdale, Albert Fricke, and William B. Atkinson, of Philadelphia.

Officers of Sections—Practice of Medicine, Materia Medica, and Physiology, F. G. Smith, Pennsylvania, chairman; B. A. Vaughn, of Mississippi, secretary. Obstetrics and Diseases of Women, Samuel C. Busey, of District of Columbia, chairman; R. Battey, of Georgia, secretary. Surgery and Anatomy, Alonzo Garcelon, of Maine, chairman; E. T. Easley, of Texas, secretary. Medical Jurisprudence, Chemistry, and Physiology, E. L. Howard, of Maryland, chairman; E. L. Hurlburt, of Illinois, secretary. State Medicine and Public Hygiene, B. C. Kedzie, of Michigan, chairman; Ezra M. Hunt, of New Jersey, secretary.

Judicial Council—The terms of a portion of the Judicial Council expiring at this meeting, the following were appointed to take their places: Levitt S. Joynes, Virginia; R. N. Todd, Indiana; Robert Battey, Georgia; James E. Morgan, District of Columbia; T. B. Flager, New Jersey; S. N. Bentram, Pennsylvania; A. Dunlap, Ohio.

The following were appointed a committee on the Prize Essays: Drs. Samuel D. Gross, F. G. Smith, Alfred Stille, E. Wallace, H. C. Wood, Pennsylvania.

Dr. Bowditch, of Boston, made some extended remarks upon the practicability of establishing a National Council of Health, and offered the following resolution:

Resolved, That each year, until otherwise ordered, the President elect and the Permanent Secretary be directed to appeal, in the name of this Association, to the authorities of each State, where no State Board of Health exists, urging them to establish such boards, and that the Permanent Secretary be directed to report the names of the States where Boards of Health exist, and also those which decline to establish them.

After several complimentary speeches were delivered, and the adoption of resolutions of thanks for hospitalities received, the Association adjourned to meet in Philadelphia on the first Tuesday of June, 1876.

Association of American Medical Editors.—This Association held its annual meeting at Louisville, May 3rd. The President, Dr. Edgar, delivered the annual address. The subject of it was Medical Advertising and Medical Education.

The following officers were elected for the ensuing year: President, Dr. Bell; Vice-President, Dr. H. C. Wood; Secretary, Dr. F. C. Davis.

Selections.

(From the Psychological and Medico-Legal Journal.)

THE NEUROTIC ORIGIN OF DISEASE, AND THE ACTION OF REMEDIES ON THE NERVOUS SYSTEM.

By FREDERIC D. LENTE, M.D.,

MEMBER OF THE COUNCIL OF THE NEW YORK NEUROLOGICAL SOCIETY.

Read before the New York Neurological Society, Dec. 7, 1874.

[Continued from page 460.]

Quinine has already been discussed in this paper in some of its relations, especially as regards its action on malarious and neuralgic affections. Its power of arresting or retarding the amœboid movements and migration of the white corpuscles of the blood, and thus preventing inflammation or suppuration, asserted by Binz, has been lately called in question by other observers, and his

inferences, rather than his facts, discredited. He also claims, that, as quinine arrests putrefaction and fermentation by killing the spores or fungi which cause these changes, it will also arrest or relieve septicæmia. But his experiments on animals do not sustain this view. It is generally admitted, however, that large doses of quinine do have a remarkably beneficial influence on septic diseases ; and we can only explain it by its action on the nervous system—such an action as we have claimed for it in other affections. The antipyretic virtue of quinine, so highly commended of late, has also been denied, but principally, I think, in consequence of observations made on *healthy* men, which is a most fallacious guide, except where ocular inspection of the physiological processes can be had. Dr. H. Wood, who ably discusses this question of the various actions of quinine on the system, comes to the conclusion that “it exerts in febrile disease a decided but feeble antipyretic action.” He, however, seems to draw his conclusions almost entirely from German sources. The experience of American physicians will be found more favorable. There is nothing, in all the various and ingenious experiments and observations, it will be noticed, which warrants the generally received opinion that it has any modifying influence on the blood itself, or any antidotal effect against supposed disease germs, either vegetable or animal. But on the blood-vessels its action is not so well settled. This is an important question, and has attracted the attention of our sister Society at a previous meeting, but the experiments and observations which had then been made* were too meagre to give much support to either side. The result of Dr. Hammond’s experiments with his *cephalohæmometer*, was opposed to that of Dr. Janeway, who used ocular inspection of the vessels, through a similar opening in the skull. It is a little singular that, when Binz and others in Germany, were observing, in so many instances, the effect of quinine on the *contents* of the vessels, they should have made no note on the condition of the vessels themselves.

* If the effects of these drugs were produced through the medium of absorption into the blood, we could hardly reconcile such a theory with the above remarkable facts. It would, however, seem that a fluid preparation, like croton oil, lying for hours in the intestines, must be absorbed to a great extent ; but, supposing this to be so, it does not produce its characteristic effect, as we have seen by the result of injection into the veins.

But I am able now to supply to a certain extent this oversight.

I learned from Dr. George R. Cutter, one of the surgical staff of the New York Eye and Ear Infirmary, that he had occasion to examine into this matter in Germany, and he was kind enough to give me the results from memory, as he had lost his notes. I extract the following interesting account from his letter :

"While working in Prof. Julius Arnold's laboratory in Heidelberg, during the winter of 1870-71, a Russian, whose name I have forgotten, was making a study of the effect of quinine on the system. At his request I examined the dogs, rabbits and frogs with the ophthalmoscope, and made measurements of the retinal vessels, before giving quinine, as well as at various periods during the administration and afterwards. A gradual but marked diminution of the *arteries* took place, and before the death of the animals, the arteries became mere threads. The veins were also much diminished in diameter. The animals often became blind, and the retina was anæmic in the highest degree. The mesenteries of frogs were exposed under the influence of woorara and without. Quinine was injected into some of the frogs. The mesenteries were kept warm, and covered with serum. Under the microscope the effect of the quinine on the arteries was well marked. Inflammation was delayed. The *auswanderung* of the corpuscles was also very much retarded and diminished, and the inflammatory dilatation was lessened to a considerable degree."

These results were also *controlled* by Profs. O. Becker and J. Arnold, Jr.*

The effect on the corpuscles, mentioned by Dr. Cutter, agrees with the observation of Binz and others, to which I have just alluded.

Strychnine is one of the most important of the neurotics, since it stands as yet the sole representative of the motor-excitants, while we have a number of powerful motor-depressants. With regard to its effects on the

* Others have noticed this interference with the motion of the corpuscles, when experimenting with other agents which contract the capillaries, as digitalis and ergot; evidently due to the narrowing of their calibre, and finally, in the case of digitalis, to complete closure. I have said it is singular that Binz did not remark upon the contraction of the arterioles, if there was any, but he was looking for something else, namely, the direct effect of the quinine on the corpuscles, and of course attributed their tardy movement to this.

capillaries, it has been seen in one instance at least, according to German authority, to *contract* the vessels of the frog's foot. This cannot be accepted without further observations, since it is not what we would be led to expect from other experiments, and from clinical observations. That it induces hyperæmia of the cord is an accepted fact, and it is quite common to use a very small hypodermic injection as a diagnostic, when we are in doubt as to whether we have anæmia or hyperæmia. Clinical observation would also lead us to infer that it produces dilatation of the cerebral vessels, but I believe that no *experiments* have been made in this direction. I would here remark that probably some of the many discrepancies which are noticeable among experimenters of equal ability, with these active poisons, may be accounted for by the fact that the effect on the lower animals, of a *large* dose, which is generally intended, and an *overpowering* dose, or an *overwhelming* one, is often very different, and sometimes directly the reverse. This very drug affords an example, as the following quotation shows: "As Fraser has discovered for atropia, Vulpian has found for strychnia; namely, that after a time, say, from some hours to two days, if the dose has been of the right size, the strychnic *paralysis* passes off, the motor-nerves are found to have regained their power, and the convulsions reappear and continue for hours or days." H. Wood (op. cit.)

We have also seen, in the first part of this paper, that a certain degree or extent of impression on the surface of the human body may cause a *contraction* of the visceral vessels, while an impression, greater in degree or extent, may cause *dilatation* and rupture. That the influence of this drug is entirely exerted on the *nerve-tissue* of the spinal cord, in the production of the motor phenomena, and not through the blood, on the nerves themselves or the muscles, is well established by numerous experimenters.

Dr. S. Weir Mitchell informs me that he has lately performed the following experiment: Having bled an animal nearly to death, and also isolated a portion of the cord from its vascular connections, he applied strychnia to it, and its peculiar action was well pronounced, showing its action on the *nerve-cells*. We may, therefore, deduce this valuable therapeutical inference, that in cases of spinal or cerebral anæmia with impairment of nutrition of nerve matter, we may employ this remedy for a

double purpose, to act *directly*, and also indirectly by increasing the supply of blood. The prompt and direct conveyance of the strychnic influence from the surface, through the afferent nerves to the spinal cord, and thence to the most distant parts, is proved by the often-repeated experiment of isolating the sciatic nerve in the frog, by a section of all other tissues, and then applying the poison to the foot. It is promptly conveyed to the spinal cord, and its effects manifested in the other limb and elsewhere. I refer to the two following clinical observations as illustrations of the value of the application of the results of this experiment to actual practice.

The treatment of the following case I had the opportunity of watching through the courtesy of Prof. Hammond. The history I had from the patient himself.

CASE I.—Mr. W., a grain inspector of Chicago, was attacked three years ago with epileptic convulsions; has had them once a month or oftener; also some threatening cerebral symptoms; had no treatment that he knows of except moderate doses of bromide of potassa and chloroform inhalation. In June last he had a recurrence of cerebral symptoms, insomnia, pain, double vision, etc. This lasted two weeks and disappeared. On the 14th July, after some exposure to the sun, he was again attacked with the above symptoms, to a greater degree, and with complete inability to raise the eyeball or upper eyelid (left eye), also extreme internal strabismus, diplopia and severe cephalalgia. These symptoms occurred suddenly in the night. Could neither read, nor distinguish the quality of grain. The strabismus disappeared slowly, and the ptosis also diminished somewhat, so that when he applied to Dr. H. about the 13th October, 1874, he could, *by an effort*, raise the lid so as to expose the cornea, but it fell back immediately; other symptoms the same. He was put upon increasing doses of the iodide of potassium, with the idea of relieving the *basilar meningitis*, presumed to be the cause of the symptoms, the application of the induced current to the brow and temple, and the hypodermic injection of strychnia. No *immediate* effect could be expected from the first two remedies; it is to the last that I desire to direct attention. Prof. Hammond proposed to inject the solution directly into the affected muscles, and accordingly did so, using grs. $\frac{1}{2}$ in two drops of water; it is presumed that it passed into the muscle, or most likely in its immediate proximity. In all, six injections, I think, were used. I

watched the effect carefully, and tested the eye and lid after each. They were done each alternate day. He declared that he perceived quite a decided effect. After the second there was no doubt, as I could see the change within fifteen minutes both on the ball and on the lid, but especially on the latter; after the third, the *ptosis* had entirely disappeared, and he could raise the *ball* to a horizontal plane; the *diplopia* had disappeared, and he could read by holding the book low. After the fifth injection (gr. $\frac{1}{16}$) no difference in the appearance of the eyes was distinguishable, and he could read with the book held directly before him. He considered himself cured.

A case of almost perfect deafness, incapacitating the patient entirely from business as a lawyer, partly from Eustachian trouble and partly from an affection, apparently, of the auditory nerves, was treated by Dr. Hammond under my observation with a striking effect. I could converse with him, after two or three injections, at a distance of two feet, with the voice slightly raised, and speaking very distinctly, with no difficulty; but, in cases of deafness, it is so easy for a patient, who is anxious to improve, to deceive himself and others, that I should wish to see or hear from him a month afterwards, before reporting a cure. He, however, returned to his home in Buffalo, with his brother, both convinced of very marked improvement, if not cure.

CASE II.—(From the private note-book of Dr. C. R. Agnew—notes abridged.)

Amblyopia, from tobacco and alcohol.—On testing vision, it was found to be $\frac{1}{16}$ with either eye, and not improved by glasses. Both visual fields perfect, and no color scotoma. On ophthalmoscopic examination, both eyes emmetropic, and in each eye that dirty, ill-defined appearance of the nerve and retina, which, taken in connection with diminution of the vision, without other evident cause, usually leads us to suspect alcohol and tobacco poisoning. Directed him to abstain entirely from alcohol and tobacco, and to return in a week. Oct. 30, one week later, R. E., V. $\frac{2}{16}$, L. E., V. $\frac{3}{16}$. Injected strychn. int. gr. $\frac{1}{8}$, and in one minute vision rose to $\frac{4}{16}$ with both eyes; and five minutes later to $\frac{5}{16}$. The injection was in the cellular tissue, but not in that of the affected part. In Dr. Hammond's ear case, it was in the arm. I do not suppose that the medulla spinalis was affected through the rapid absorption into the blood, but that

the effect was transmitted to it, as electricity would be, and as, in the case of the sciatic nerve of the frog, almost instantaneously. Nor do I suppose, even if the solution reached Mr. W.'s superior rectus muscle, which it probably did not, that it affected the muscle *directly*; for it is now an unquestioned fact, that if the leg of a frog is amputated, and a solution of strychnia injected into the artery, no effect on the muscles follows. It must take place, if at all, through the spinal cord, and cannot reach it through the blood, as has been demonstrated by the late experiment of Weir Mitchell, and by others.*

The effect of *atropia* on the vaso-motor system, and probably on the nerve-tissue itself, is scarcely less interesting and important than that of ergot and strychnine, but I am compelled to abstain from the more thorough analysis of its physiological and therapeutical action, as well as that of the other valuable drugs enumerated in the list, in an early part of this paper which was proposed; in consequence of its unexpected length, which was wholly unintentional, but could scarcely have been avoided. For the same reason it will be advisable to defer reading the *cases* appended to this paper, and which were relied upon, in some measure, to corroborate the facts and opinions here and there given, without a due amount of evidence. With ergot, *atropia* has been lately relied upon as our best resource for reducing the calibre of the capillaries, and thus relieving inflammation.

* As illustrative of the action of strychnine in these cases, I refer to a case published by me in the *Am. Jour. of Med. Sciences*, 1862, of injury to the branches of the supra-orbital nerve, by a fragment of copper cap, causing partial amaurosis, and immediately relieved by removing the foreign body; also other cases of amaurosis caused by trivial cicatrices of the scalp, and relieved by excision. Handfield Jones states cases of paralysis of the muscles of the eye from neuralgia. (*Practitioner*, March, 1874.)

Mr. Charles Hunter, of London, who has written largely on hypodermic injections, makes a statement calculated to injuriously circumscribe the applicability of strychnine in these cases, to the effect that if improvement does not follow three or four injections, the case might as well be regarded as hopeless, so far as this remedy is concerned. This statement is contradicted by my own experience, by that of Prof. Hammond, especially in cases of infantile paralysis, and by several American oculists. In fact, the proper dose cannot be ascertained until several have been given, as the toleration of different patients differs materially.

The effect of the little gelatine wafers, used by oculists to dilate the pupil, is similar to that claimed for strychnine, otherwise it seems incredible how the 1-20000 part of a grain of *atropia* should act, as it does, almost immediately. If it is claimed that it acts through the blood, then the disciples of Hahnemann might well claim this as a proof of the efficacy of any of his attenuations.

The physiological experiments on animals are very numerous, and the number of distinguished experimenters large. An excellent *resume* of these interesting experiments will be found in H. Wood's work, so often referred to, which conclusively demonstrates the fact of a decided contraction of the arterioles, not from the direct effect observed under the stimulus of atropia on the frog's foot, or the mesentery, but mainly from the uniform increase of *blood-pressure*, from contraction of the capillaries, and the absence of this after section of the medulla. Dr. Wood has also repeated these experiments. —*Am. Jour of Med. Sciences*, April, 1873. One of the clinical histories, which were to have been appended to this paper, affords a striking exemplification of this fact. The excessive congestion of the lungs, and extravasations therein, and even of the retina itself, shown in post-mortem examinations of those dead from immense doses of atropia, indicate, as has been indicated in the case of other alkaloids, the importance, in estimating their physiological effects and therapeutic value, of discriminating between the phenomena produced by moderate and by inordinate doses respectively. Atropia has lately been highly recommended in excessive sweating, especially of phthisis; we all appreciate how annoying and intractable a symptom it is, especially since we cannot usually remove the cause. Supposing it to be due to a vaso-motor paralysis of the *plexus* supplying the sudoriparous glands, we should expect a remedy like this to act promptly on its nerves, diminishing the lumen of the vessels, and thus arresting the hypersecretion more certainly than the ordinary astringent remedies usually given, and which act through the uncertain medium of the blood, in which they must necessarily be largely diluted. Besides this, our most reliable remedies are very *hot* water to the surface, producing a reflex action, and the old-fashioned sage-tea. Had we the active principle of the sage, or volatile oil, so as to employ it in more definite and reliable doses, it might succeed even better. The great value of atropia in opium-poisoning is now so generally admitted, though still denied by many writers, that it is hardly necessary to allude to it. I have published several striking instances myself, and would refer any skeptics to Dr. Trask's account of his own case (*N. Y. Med. Journal*, Nov., 1874). He took a dose, by mistake, estimated at six to seven grains; and I heard him read an excellent paper recently before the

Obstetrical Society of this city, indicating no damage to body or mind. Electricity and atropia saved his valuable life.*

The consideration of *opium* naturally succeeds that of belladonna. M. See has lately placed morphia with strychnine as a "motor of the spinal cord." Recent extensive experiments in Germany go to show that the local application of morphia increases and protracts the excitability of the nerves induced by strychnia; and its action on the brain, in certain doses, not too large, is similar to that of strychnine. Opium has not yet been proved experimentally to dilate the capillaries, but clinical observations lead us to infer that it does. We have seen how prompt is the action of belladonna in the relief of sweating, and we know how certain the action of opium is in its production. The idea that opium does produce hyperæmia of the brain has had a firm hold on the minds of the profession from the earliest period, and has had a very unfortunate influence on the treatment of cerebral affections, especially in childhood, and on a large number, perhaps, whose convulsive phenomena are due to mere *irritation* of the meninges from a morbid influence applied to the peripheral nerves in a distant part of the body, generally in the abdomen. Though opium may physiologically dilate the cerebral vessels, and though a positive inflammation of the encephalon may exist, if the pain is excessive, the restlessness and insomnia protracted, and uncontrollable by other means, as cold, bromides, atropia, etc., as is too commonly the case in acute forms, opium is our only resource; it may have to act in some desperate cases, by its overwhelming effect. But it may generally act in a legitimate and rational manner. The old maxim, *ubi irritatio ibi fluxus*, will explain it. The very pain and its consequences cause or increase the flow of blood, and the relief of pain and the allaying of excitement restore, to a considerable extent, the balance of the circulation. The truth of the above maxim is well illustrated in facial neuralgia, which cannot be charged with being inflam-

* Two remarkable cures by belladonna of exophthalmic goitre, in which the symptoms had assumed such proportions as to threaten death, are reported in the *Lancet*, 1874, by Dr. Smith, of London. Various other remedies had been used in vain. Profuse sweating in both was a prominent symptom. Five drops of the tincture were given hourly, and there was a rapid and progressive fall in the frequency of the pulse. At the end of ten days a drachm was given daily.

matory ; when excessive, the face becomes red and swollen, looking as if it had been struck ; a full and effective anodyne relieves the hyperæmia as well as the pain. No matter what the disease, whether attended by fullness or anæmia of the vessels, if pain or spasm is uncontrollable by other means, opium is a proper remedy. Even in the profound coma of *uræmia*, opium, by allaying the irritation of the brain, produced by the poison, will rouse the patient out of it. In the convulsions and coma attending or following the puerperal state it is our best remedy ; though, when the patient is in good health, the old plan of bleeding, no doubt, aids materially by removing a portion of the poison with the blood. It is hardly necessary to say that, in all these cases, the action of opium is on the nervous system, and has no influence whatever in the blood, which is its vehicle merely.

I have included the *anæsthetics* in the list of neurotics, because their action, however we explain its rationale, is on the nerve-centres ; it is through them that they produce all their marvellous effects, and it is to them that we must look for explanation of the fatality which attends the use of some of these agents, and to which we must direct our means of resuscitation when death has occurred, or is imminent. On the capillaries, both ether and chloroform have been proved, by experiments and observations, to act like atropia, ergot, etc., to contract them ; we need not fear to give them, therefore, in congestion or inflammatory conditions, though the struggles, which are apt to precede full anæsthesia, may temporarily increase the fullness of the cerebral vessels. Various explanations of the cause of anæsthesia, and of death from it, have been given, but none of them are thoroughly satisfactory. In the few cases of death from ether, it has been noticed that respiration is first arrested, and some time after, the action of the heart. The reverse is the case with chloroform ; with ether, the effect is slow, and preceded by symptoms, which, with watchfulness, might enable us, perhaps always, to ward off a fatal result ; with chloroform, it comes like a stroke of lightning, the heart is paralyzed in an instant. How can so sudden an action be explained ? Only, I think, by a reference to a reflex influence on the nerve-centres. Because the application of pure chloroform to the naked heart, or the injection of pure chloroform into the jugular vein, has produced instant paralysis, it has been assumed that the

paralysis in inhalation is also caused by direct action through the blood; it is surprising that one who reasons so well, and analyzes so well as Horatio Wood, should adopt this explanation. The charging of the blood by any anæsthetic must, under any circumstances, be a slow process, and a sudden effect could hardly be expected; and the paralysis, produced by the direct application of so irritating an agent as chloroform, whether to the surface of the heart, or internally, through the jugular vein, is more likely caused by reflex action, which would just as soon follow ammonia or nitric acid; just as when atropia was applied to the frog's foot and contraction of the capillaries followed, it was assumed that it was from its direct action on the vessels, but subsequent experiments, with the skin above the foot divided, showed that it was from reflex action. On what peripheral nerves, then, does the chloroform act to produce so powerful a reflex influence on the nerve-centres and thence on the heart? I answer, on those of the air-cells and the bronchioli; and the reason why it does not *always* produce this effect is, that it is generally largely diluted with air; and, a greater protection still, because the air, entering the lung at each inspiration, bears but a small proportion to that already in the lung, the *residual air*, and this therefore can be but slowly charged. But this care in diluting the anæsthetic with air, notwithstanding the evidence which is so satisfactory to a coroner's jury, is, as we all know very well, sometimes forgotten in the interest of the operation, and, now and then, I fear, in sheer recklessness, and the full force of the vapor, by an unusually forcible inspiration, is carried deeply into the lung, and, acting on nerves already pretty thoroughly impressed, induces the sudden reflex phenomenon which we frequently see exemplified by other accidents on other parts of the system. Walshe says: "Saturation of the nerve-centres is the essential and radical cause of the event." This is high authority, but he does not advance any proof, and the effect is too sudden to give the idea of saturation, through the blood. Whatever the impression may be, it must be something sudden and powerful, generally acting on tissues already tolerably saturated, but not necessarily so, as the effect is sometimes produced at the commencement of the inhalation. Paralysis of the heart is an exceedingly common accident from a great variety of causes, mental and physical, and occurs as the cause of death, and often as the unex-

plained cause of death, in many diseases. It occurs in animals as well as in men, from mental emotion alone ; in the former, from fright, of which there are numerous examples ; in the latter, from pleasurable as well as painful emotions. Of the former, a little bit of revolutionary history will serve as an example. When the surrender of Lord Cornwallis was announced suddenly to the door-keeper of Congress, he fell dead. Similar examples are on record. Fright, we all know, will suddenly, by acting on the nerve-centres, relax the sphincters, and act on the bowels, and also produce sudden death. A blow on the epigastrium, transmitted to the semi-lunar ganglion, or the crushing of an extremity, (Walshe), will paralyze the heart.* The effects of the inhalation of ether and chloroform respectively, and likewise of the slow and sudden inhalation of chloroform, may be likened to those of the gradual and the sudden annihilation of the brain, as detailed in the experiments of Legallois, in which he showed that the heart continued to beat after he had removed the entire brain, piece by piece, *slowly*. But, that instant paralysis followed *sudden* crushing of the encephalon. This may, I think, be considered an *experimentum crucis* in sustaining the theory advanced in this paper as against that of the direct action on the heart (Wood) or the gradual saturation of the nerve-centres (Walshe).† Flint says that

* As additional evidence, for those who require it, of the important and immediate influence we may exert, by our remedial applications, whether by heat, cold, mechanical violence, as by cupping, electric shocks, etc., or by drugs, I refer to p. 437 of Flint's Physiology of the Nervous System. "Brown-Sequard and Lombard found that pinching of the skin on one side was attended by a diminution of the temperature in the corresponding member of the opposite side ; and that, sometimes, when the irritation was applied to the upper extremity, changes were produced in the lower extremity. Tholozan and Brown-Sequard found also that lowering the temperature of one hand produced a corresponding depression in the heat of the opposite hand, without any notable diminution of the temperature of the whole body. Brown-Sequard showed that, by immersing one foot in water at 41° F., the temperature of the other foot was diminished about 7° F., in the course of eight minutes." These facts show that certain impressions made upon the sensory nerves affect the animal heat by reflex action. Also that the application need not be made in the immediate vicinity of the part designed to be influenced.

† B. W. Richardson says death is produced by the action of the vapor on the peripheral nervous system. But he explains it in this way. The inhalation suspends respiration "for an interval, then accumulation of carbohc acid in the blood, then irritation of the vagus, then arrest—from the irritation—of the action of the heart."

Why not irritation of the vagus *primarily* (by the chloroform) rather than *secondarily* (by the carbonic acid), since the former is certainly more irritating than the latter ? And the sudden character of the death would rather

sudden or powerful galvanization of the *pneumogastrics* will so excite their inhibitory action as to endanger heart paralysis. "The effects of pressure on those nerves in the human subject," says Flint, "is described by Aristotle, quoted by Waller. In some cases the patient falls instantly, as if struck by lightning, while in others the effects are not so marked." Waller performed several painless operations under this mechanical anæsthesia.

Dr. Marion Sims, in his paper recently read before the British Medical Association, attributes the danger to *cerebral anæmia*, and highly extols Nelaton's plan—suspension with the head downwards, by which a patient of his was restored to life. Of all single means of resuscitation this is probably the best. But we must go behind the anæmia to find out the source of danger; for this is due, as has been suggested, to cardiac paralysis, and behind this is the fatal chloroform vapor acting through the peripheral nerves (of the pneumogastrics); so on the nerve-centres, especially the *medulla oblongata*, exciting their inhibitory function, through the *par vagum*, on the cardiac ganglia and plexus. So that while we invert the body, we should also endeavor to rouse the heart's action by electricity applied to the pneumogastrics; and by applying the electrodes just above the clavicles, on either side of the neck, we may act upon the phrenics at the same time, thus exciting the diaphragm, and inducing respiratory efforts. This, in all probability, would have saved Dr. Sims and his illustrious confrere a world of dreadful suspense. With these measures might also be combined the injection of stimulants *per rectum*, or *intravenous* or even of ammonia, after the manner of Halford, the use of digitalis, and of nitrite of amyl.

Cardiac paralysis, or a tendency to it, *cardiac asthenia*, as Fothergill* aptly terms it, is so common and so

indicate a direct than an indirect process. It ought not to be forgotten, in estimating the effects of chloroform, that it *directly* tends to produce cerebral anæmia, by contracting the vessels; as does ether also. It is probable that force and fullness of the heart's pulsation, and diminished frequency, so commonly consequent on full anæsthesia, is due to a general contraction of the arterioles or the capillaries, and a consequent rise in arterial tension, and that the remarkable feebleness of the heart's action, which not uncommonly follows recovery from anæsthesia, is due to the sudden expansion of those minute vessels, and rapid drain on the encephalon. Here the nitrite of amyl would seem to be the remedy. Max. Schueller's recent experiments on animals demonstrate that this drug can remove the effects of chloroform on careful vascularity very promptly.

* "Digitalis: Its Mode of Action and its Use." By J. Milner Fothergill, London.

dangerous a complication of a great variety of diseases, that it demands further notice. Many times have physicians been astonished and shocked at a sudden and inexplicable "turn" for the worse, or a sudden death, in a case of acute disease, when all seemed to be going well; and their astonishment has not abated when, on a post-mortem inspection, they have been able to discover no sufficient cause of death. Two cases have, within the past two weeks, occurred in my own practice, which may serve as examples:—

CASE I.—L. T., a stout, healthy, temperate young man, had single *pneumonia*, and was attended, in my absence, by Dr. J. C. Young, late Resident Physician of Bellevue Hospital. The case progressed as usual, and in the course of a few days resolution commenced; then the other lung was invaded, but he showed no unusual or alarming symptoms; was taking stimulants very moderately. At 9 o'clock P. M. was seen by the doctor; pulse, 104; fair strength; respiration not particularly bad. At 12 P. M. he became weak and restless, then delirious. The doctor was called at 4 A. M., and found him with a feeble, frequent and irregular pulse, and he died in almost twenty minutes, although he swallowed the stimulants freely given.

CASE II.—Notes furnished by Dr. Murdock, who treated the case.

October 23. Mrs. M. C.—seventh day of single *pneumonia*. Doing well, and resolution commencing. Had taken nourishment abundantly, and had not required any stimulants. To-day found her pulse had risen from 100 to 116, and was somewhat feebler. Ordered brandy, $\frac{3}{4}$ iij, daily. Called in haste to her at 9.30 P. M. Found that she had steadily grown worse through the day, and for some hours alarmingly so. I found her almost pulseless, the heart's action too feeble, rapid, and irregular to number. Surface bathed in cold sweat, extremities cold, inspirations frequent and shallow, mind wandering. Ordered heat to extremities, and warm blankets. I gave three drachms of brandy every ten minutes. This was kept up at intervals of fifteen to twenty minutes, for nine hours. She also had a half ounce in beef tea, *per rectum*, every hour and a half, and *ammon. carb.*, gr. x, 2 h. Her case seemed utterly hopeless for some hours. It was not until near midnight that the skin became at all warm, and the pulse sufficiently strong to be numbered, still irregular. At 1.30 A. M. pulse

120, and more regular ; skin warm. October 24, 9 A. M.—Stimulants have been continued steadily in same doses. Pulse 120, but quick and feeble. Three P. M., patient becoming hot and flushed. The brandy was given only every half hour, and the enemas were not retained, and had to be discontinued. Now, pulse feebler, and constantly intermitting. Continued brandy every twenty minutes, carbonate of ammonia, and also *inct. digitalis*, m. x, q. 2 h. Six P. M., improving, pulse more regular ; to give brandy every thirty minutes and digitalis every hour and a half. October 25, 8 A. M.—Much improved. Pulse 108, and quite regular. Brandy as before. Digitalis q. 2 h., and stop ammonia. Eight P. M., improving ; digitalis q. 3 h. October 26, pulse 98 ; stop digitalis. From this date she continued to improve regularly. Attention is called particularly to the fact that there was no apparent change in the condition of the lungs to account for the sudden failure of the heart, and that, with the constant administration of stimulants, by mouth and rectum, for twenty-four hours, no marked improvement resulted until the digitalis was commenced, and almost immediately a favorable change was inaugurated.

Dr. Young calls to mind eight cases of pneumonia, two noted as double ; and his successor remembers two others, and a case of Bright's disease, during his term of service (two years), in which sudden death occurred while the patients were walking to the water-closet, or merely getting on their feet, and of course not considered in a particularly dangerous condition. A case is related in the August number of the *New York Medical Journal*, as having occurred at the Charity Hospital, in which sixty-four ounces of serum had been drawn from the pleural cavity by aspiration, and eight hours after, the patient having been in the meantime comfortable, and sitting up part of the time, fell dead while walking to the water-closet. Prof. Hammond lost two cases, while in the army, in this manner ; and a lady, under his treatment and that of Dr. Sims, for the opium habit : she died while waking across the floor. In convalescence from diphtheria, and during the attack, though the patient may not seem particularly weak, and able to be about the room, sudden death from this accident is very common. The first child I ever saw with it died during convalescence, from *taking her up*, contrary to express order, to pass water ; and another, whom I had seen a few hours before walking about the floor, but with patches of dense membrane

covering the pharynx, fell dead while walking from the sofa, on which I had directed he should be kept in the recumbent posture, to where his father sat, a few feet away. A lady, upon whom I had performed artificial delivery for convulsions, three days before, who was progressing favorably, and who was expressly ordered not to raise her head, feeling pretty well, sat up to take some drink, and fell back gasping, and was dead in an instant. Dr. North, then of Bellevue Hospital, who was assisting me in my practice at the time, was promptly by her side, but she could not be revived. She was excessively pale. These cases are all recent, and might be multiplied by consulting the journals and records of hospitals. Of course, some will attribute this accident to heart-clot. The autopsies in the hospital cases only showed clot in one. In diphtheria, we know that paralyzes, in all parts of the body, are common. And the appearance of the patient's countenance in the other cases indicated paralysis rather than clot. Besides, when we do find clot, it is probably, in most cases, *post-mortem*, or forms in the death struggle.

"In this condition," says Fothergill (op. cit.), "we find the pulse furnishing us with the precursory evidences of approaching death." A very frequent, a weak, and an irregular beat. Clinical evidence informs us that this is most apt to occur in thoracic diseases, especially pneumonia! Why it is so is very evident, and it is hardly necessary to repeat the very lucid explanation of Fothergill. Suffice it to say, the lungs imperfectly aerate the blood, which flows *slowly* into the left ventricle, while the right becomes distended. "We have the blood more than ordinarily laden with carbonic acid, an agent which has a direct effect in paralyzing the heart, when brought in contact with the endocardium." An experiment of Cyon will illustrate this. He passed a stream of serum charged, and then one not charged with carbonic acid, and thus paralyzed and then restored the contractions at will.* There are all grades of this *cardiac asthenia*, from impending paralysis to a point where the want of correspondence between the state of the pulse and other symptoms is barely noticeable; and between these two degrees will be found a large proportion of cases, in which a remedy directed expressly to this peculiar heart-trouble may strike the balance between life and death, or may greatly

* Sydenham Soc. Year-Book, 1867-68.

curtail the duration of convalescence. It is in these cases that stimulants act so well, so greatly insisted on by Hughes Bennett. But frequently stimulants are too slow; and here digitalis, even by hypodermic injection, if necessary, proves its great superiority. "The question of special stimulants to the cardiac ganglia has," says Fothergill, "scarcely ever been broached." In these desperate cases, we must remember that *opium* also may afford material aid, and that it seldom acts, unless in unreasonable doses, otherwise than favorably on the heart; and if jactitation or pain be present, a hypodermic injection should be used.

I had a most remarkable exemplification of the value of opium in advanced heart-disease, a few years since. An old man, known to everybody in the neighborhood of Cold Spring as Johnny Moon, had severe valvular disease of the heart for nine years. Finally dropsical symptoms set in, and he took to his bed, and after having exhausted all the ordinary remedies, with temporary relief, finding his sufferings very great from the great amount of effusion and debility, I gave his wife a solution of morphia, to be used *pro re nata*, and no other remedy. I did not happen to see her for several weeks, when I met her, and to my inquiry she said, "Oh! doctor, that last medicine is curing him." And, surely enough, the effusions everywhere had entirely disappeared, and for some years after he was apparently quite well. But the heart-sounds were, of course, unchanged. I was in the habit of exhibiting him to my medical friends as a curiosity. He did not, after all, die of heart-disease or dropsy.

The cases of delirium tremens to which digitalis is applicable, and for which doses of two and four drachms even have been prescribed successfully, are those of cardiac asthenia, and indicate the boldness with which it must sometimes be given. Here the hypodermic injection would probably be safer. In very dangerous cases of suppression of urine, when digitalis, in the usual doses, fails to act, I have used poultices of digitalis, made by wetting flannels in a very strong infusion—four ounces to a quart—and using all the leaves (and none but the best English should be used) in one poultice, which extends all around the body, and from the thorax to the pelvis. H. Wood cautions against the danger of making the application too extensive and too strong; but I have used it as above, both in children and adults, and

never saw any ill effect. However, no one should employ any of these powerful agents, now under discussion, without bearing in mind that he is dealing with a two-edged and a very keen-edged weapon ; and that, when we speak of giving these fearlessly, and in such bold doses, it is generally in cases of imminent danger, where delay or pattering treatment is the most hazardous of all.

The *nitrite of amyl*, a remedy of recent date and not yet officinal, has already been alluded to in connection with the effects of other drugs. It is a most valuable addition to our neurotics, since its action on the nerve-centres is prompt, uniform and decided, and, with moderate care, it is quite safe ; patients afflicted with epilepsy or *angina pectoris* being constantly trusted to use a regulated dose themselves by inhalation. In all spasmodic conditions it is invaluable. Prof. Janeway recently related the particulars of a case occurring at Bellevue Hospital, of a patient "moribund from advanced Bright's disease. He was unconscious, pulseless, pupils widely dilated, no sensitiveness of conjunctiva ; twenty-five drops restored consciousness. The pulse gradually became full, and the patient could talk," and seemed like one restored from death to life. This is precisely similar to the effects produced by the transfusion of moribund cholera patients with saline solutions. The truce is but a brief one, however. Its importance as an auxiliary in the cerebral anæmia of chloroform poisoning, and of other similar and not necessarily fatal conditions, has already been noticed. As strychnine is used to diagnose doubtful conditions of the circulation in the *cord*, so we may use this drug for the *brain*, and Weir Mitchell* has used it for this purpose ; Prof. Hammond also. Quite recently I have seen two cases in the practice of the latter, of epilepsy, in which the drug evidently precipitated the convulsion, and it was necessary to abandon it. Crichton Browne, in his large experience with this remedy, has, I believe, met with no such cases. This drug produces three most marked physiological actions, and with remarkable celerity and uniformity ; first, dilatation of the arterioles, consequent sinking of blood-pressure, and of the action of the heart ; secondly, loss of functional power, even to complete abolition, of all muscular tissues ; thirdly, remarkable fall of temperature. Dr. H. Wood (op. cit., p. 299) says : "I have seen a pigeon per-

* Medical and Surgical Reporter, July, 1874, p. 69.

fectly conscious, although his temperature had been brought down by this agent some 13°F. " As he states, that this effect is equally marked in fever, it may prove valuable as an antipyretic. This remarkable fact seems, at first glance, to be in direct conflict with the theory supported in this paper, that the rise of temperature in fevers and other diseases is due, in a great measure, to a dilatation of the smaller vessels, arterioles and capillaries, to a more rapid consequent metamorphosis of tissues, and that the action of our antipyretic remedies is mainly through their constringing effect on these vessels. But a *fourth* very remarkable property which this singular remedy has been proved conclusively to possess, harmonizes this apparent antagonism. It had been observed that in animals poisoned by it, the color of the arterial and venous blood was almost the same. Dr. Gamgee, by a series of beautiful experiments, has shown this to be due to the power of nitrite of amyl, in almost completely annihilating the oxidation of the blood corpuscles, and, to that extent, interfering with tissue change and the production of animal heat. A few drops of amyl diffused through a jar containing glowing phosphorus will extinguish it at once (Wood).

Three, four or five drops, by inhalation, from a piece of lint or a morphine bottle, constitute a dose for the most violent diseases. A case of puerperal eclampsia was arrested, as the *convulsions* would come on, by a single drop. But the secondary effects must be looked to here, as in chloroform or other inhalations under similar circumstances, namely, the danger of post-partum hæmorrhage. To *tetanus*, in connection with the physostigma or conia, and the bromides, it would seem to be particularly applicable, and some experiments on animals confirm this.

The action of *iodine* on some nervous diseases, and especially on the nervous manifestations of syphilis, is so remarkable and important as to justify considerable attention, if this paper had not already assumed unwieldy proportions. I will merely ask your attention to the fact that, though the iodide of potassium is a specific in these affections, and the bromide for certain other nervous maladies, neither the iodine nor the bromine, nor the potash alone, will have any decided influence whatever. Nor do we, as a general rule, see a *gradual* amelioration of the symptoms, but, after giving one, two, three, four, five, and sometimes six or more drachms of the *iodide*

per day, in gradually increasing doses, we see a sudden and very marked beneficial effect. And yet, if, while this tentative process is going on, we test the urine and other excretions, we find our remedy passing out of the system almost as fast as it is passing in, and, therefore, apparently not producing its effect by cumulative action. In the present state of our knowledge of the subject, there would seem to be but this explanation—that the iodine, when given alone, becomes rapidly acted on by the various chemical agents with which it comes in contact before reaching the nervous system, but, that, in the form of iodine, it is *protected* from change until it reaches its ultimate destination, where, under the influence of changes going on in the process of tissue-formation, the salt is decomposed, and iodide set free. It has been shown that medicines in a *nascent* state have a peculiar effect. Could we, in any particular case, know the exact dose without trial, very few of these efficient doses would doubtless effect a cure; since it is evidently not the blood on which we act, and, moreover, during the time in which we are finding our dose, we are interfering with the nutrition of the tissues. I may also instance the effect of large doses of the iodide of iron in some obstinate forms of hæmorrhage, especially uterine, and in nocturnal enuresis of children. It is not always that iodine requires to be administered in these very large doses to produce its decided effects on the nervous system. For instance, in spasmodic asthma, I have repeatedly relieved the most violent attacks, after failing with various remedies, by a dose or two of four or five grains, and within an hour or two. The noted Jonas Whitcomb's remedy probably owes all its success to this drug.

The *bromides* have already been incidentally alluded to. There is one rather widespread error, however, regarding their action, which tends greatly to circumscribe their usefulness, namely, that in cases of cerebral anæmia, or a condition of the circulation in which it may be supposed that this exists, they are useless and even injurious. For instance, in an abstract of a paper on the bromide of potassium, in a recent number of the *New York Medical Record*, by Dr. Carr, he enunciates the prevalent idea thus: "If the brain is already without the proper supply of blood, the extra amount which will be removed from it by the action of the bromide of potassium, will not only not benefit the patient, but will probably increase the force of the paroxysmal seizure." Now, the results of

the experiments with this drug on animals carefully collated, as well as those of clinical experience, go far towards demonstrating the fact that the least important of the effects of these agents is their vaso-motor influence; that their most important action is in controlling, and, if pushed far enough, almost obliterating *reflex* actions. First, by a direct effect on the nerve-centres, the medulla oblongata and cord especially; secondly, on the *peripheral* nerves, that is, blunting the susceptibility of the latter to painful impressions, and also the receptivity of the cord as to these impressions.* I refer to one corroborative clinical fact. In the case of a lady who had bled to the very verge of death from metorrhagia, who was insensible, and at one time pulseless, but who, upon partial recovery, fell into an alarming condition of nervousness and insomnia, which failed to yield to opium, chloral, etc., I suggested to my friend the late Prof. G. T. Elliot, who was sharing the responsibility with me, to try the bromide of potassium. He at first scouted the idea, but finally agreed, and we were gratified to find that it acted as it ordinarily does in cases supposed to be suffering from hyperæmia.

This important virtue of the bromides is well exhibited in preventing sea-sickness, and the vomiting induced by anæsthetics, and the unpleasant effects of opium and quinine, which clinical experience has recently taught me. But this property has special applicability in the treatment of certain functional diseases of the heart, the history of a case of which, now under treatment, will serve as an illustration.

A. M., a young man of fair constitution, but of a family decidedly addicted to insanity and neurotic affections, applied at my office about four weeks ago, during my absence from home, and was seen by Drs. J. C. Young and G. W. Murdock. He had left his home in the West on account of heart trouble, which had annoyed him for some months; he described it as a fluttering, and a painful consciousness of its action, the impulse being very strong. This was increased by exertion of any kind. He is not addicted to excess of any description; takes neither liquor nor tobacco. He looks pale, but is not

* It has been shown by experiments on animals, that the effect of the bromides applied directly to the nerves is very decided, and that it has therefore an effect on the peripheral nerves independent of that through the nerve-centres.

anæmic; has a good appetite and digestion; sleeps well. Four years ago had what he calls rheumatism, but it was probably myalgia. Complains now of a sort of stiffness across the chest and shoulders anteriorly. Pulse good. They examined him, and found a distinct bruit with the first sound, heard at base and apex; but after conversing with him for a time, and re-examining him, they were surprised at finding no bruit whatever. This happened at two other visits. There was no hypertrophy. On my return, I recognized the case as similar to at least two which I had seen some years ago, and, on making him change his position, the sound would change from base to apex, or sometimes disappear altogether at the same visit. When standing, merely bending well forward would alter the bruit, or cause it almost to disappear. But these changes did not, at different visits, correspond with the same positions; sometimes the sitting posture developing a louder bruit than the standing; sometimes the reverse, sometimes causing its entire disappearance; sometimes a walk, twice across the office, would develop the sound; sometimes have no effect. This is the peculiarity of the cases, and I do not think that such cases are distinctly referred to in any systematic work. Tobacco causes symptoms somewhat similar. The bruit is louder, and yields readily to abstinence from the cause. It is easily distinguishable from the symptoms of anæmia. One case, I remember, was in the person of the coachman of a friend; he was the picture of health, and had no *symptoms*, if I remember rightly, but presented himself for examination. Greatly surprised at finding a bruit, and examining him again and again, and in different positions, the same phenomena as above were developed. Seeing me puzzled about him, he said that he had been in the employ of Dr. Wm. Stokes, of Dublin, and was examined by him. The doctor, he said, called the attention of O'Brien Bellingham, who happened to be in the office, to his case. Cases somewhat similar to these have been observed by other physicians occasionally, especially in connection with *chorea* and other nervous diseases; but the sound has not been described as varying with a mere change of position, or sometimes with no change at all, at the same visit. Although these marked cases are comparatively rare, the same pathological conditions most likely have an existence, and exert an injurious influence in cases of organic disease, for the apprehension excited by a consciousness of this ailment,

especially when operating on a nervous temperament, would be apt to induce such an effect on the nerve-centres, and so on the little cardiac ganglia which preside over special sets of fibres of the heart, as to produce the irregular muscular action, or want of unison in action, which is probably the cause of the phenomenon; thus not only modifying the *organic* bruit, but impairing still further the function of the organ.

To return to the history of A. M., I advised *digitalis* as a *test*, not on the supposition that it was the appropriate remedy, also the acid phosphate and the syrup of the phosphates. In a few days he returned and said he was worse, that the thumping was more distinct. He then informed me that he had taken *digitalis* before, and with the same result. The phenomena on auscultation were not altered. Directed the discontinuance of the remedies, and to take a teaspoonful of cod-liver oil three times a day, and thirty grains of the bromide of potassium three times a day. Four days later he returned, and an examination showed no change. But, on inquiry, it was found that he had neglected to take the bromide. He was now ordered positively to commence this at once. Dec. 3rd, three days later, he presented himself, and neither Dr. Young nor I could detect any bruit, in any position in which we could place him, and on repeated examination. This was the more remarkable, if caused by the medicine, since his mind had been very much disturbed by the sudden death of the mayor of New York, whose symptoms, he imagined, closely resembled his own. Directed the medicine now twice daily. Dec. 5th. Examined the patient to-day with Dr. Young, and although he had been exercising considerably, there was no bruit in any position. There is a want of correspondence, as is often observed in these nervous cases, between the powerful impulse of the heart and the strength of the pulse. Directed to continue the medicine three times a day. We may readily imagine why this drug is so universally applicable in disease, as to draw down, on those who use it largely, the charge of hobbyism, since there is almost no complaint in which, at some stage, there may not be this undue impressibility of the nerve-centres or peripheral nerves, and consequent undue reflex activity, calling for the regulating power of the bromides.

In concluding my remarks on the action of special drugs, I refer to *conium*, which was fully discussed in Dr. Peter's paper, at our last meeting, only to direct

attention to another reliable preparation, and the only one for hypodermic medication; also to a valuable paper by Dr. J. Wilkie Burman in the West Riding Asylum Reports on its use in acute mania, in promptly subduing excessive muscular action. The succus conii, so much relied upon at one time in Great Britain, is now pretty much abandoned as uncertain, and inconvenient for its bulk. The fluid alkaloid *conia* has been attempted by their most eminent manufacturers, as Duncan and Flockhart, Morson, etc., but according to Dr. Burman, with uncertain results, until T. and H. Smith, of Duke St., Edinburgh, furnished their preparation, which, he says, he has always found reliable. The others he found not only inefficient as regards expected results, but dangerous in producing unexpected phenomena. The preparation of the celebrated Morck does not correspond in appearance with the description of the Smiths', and Mr. Nurgard, of this city, has promised to import some of the latter.

As regards the use of these active neurotics, allow me again to advert to the matter of *doses*. It is certain that most of the failure and disappointment, often complained of, has resulted from inefficient doses. We may, I think, give this as a rule of action: that the drug cannot be said to have had a fair trial unless it has relieved the symptoms or produced its toxic effects. With regard to the bromides, strychnia, opium, atropia, physostigma, this is especially the case; and in very dangerous cases, the toxic effects need often to be very pronounced. The doses, in fact, are as various as the temperaments and idiosyncracies of the patients. Every one is aware of what enormous doses of opium are borne, in certain conditions of the system, with impunity. Large doses of some of these drugs have already been adverted to, and I refer to a very interesting case in the last number of the *London Practitioner*, for an account of the successful employment of immense doses of physostigma, the patient a physician, and a man of note. He took, in four days, of the solid extract of a reliable manufacturer, sixteen, forty-eight, fifty-seven, and seventy-two grains. At one time serious paralysis was induced. But the urgency of the disease, tetanus, required a perseverance with the drug.

As many of the topics discussed in this paper are still considered *sub judice*; as the observations, which the author has had the honor to present this evening, are

intended rather as suggestive than as demonstrative, and as he is aiming at truth rather than the establishment of theory, he invites your most unrestricted and impartial criticism, and holds himself ready and anxious to receive correction and instruction on these most obscure and difficult problems of medical science.

COLD SPRING, Dec. 6th, 1874.

NOTE.

Since this paper was written, other cases, so strikingly illustrative of the correctness of the opinions expressed by the author have fallen under his notice, that he feels justified in adding them in the form of a post-script.

His attention was called to the first case by Dr. Marion Sims. A member of this Society, on going to visit a patient, got his feet and legs wet in a violent rain; he sat with the patient for a couple of hours, and soon after his return home was attacked with a violent chill, and all the usual symptoms of intermittent fever. He has since continued to have a regular recurrence, notwithstanding appropriate treatment. He has lost a great deal of flesh and strength during the attack. When we take into consideration the fact that, as was understood, he had never previously had the disease, that he was in perfect health at the time, the conclusion seems almost irresistible that the exposure was the most important, if not the only factor in the outbreak. Malaria is so prevalent everywhere, that, although living in a very healthy quarter of the city, he *may* have had some contamination. But it is not at all likely that this, if he had it, would have given any indication of its existence, had he not subjected himself to the existing cause. It is proper to add that the opinion of the author does not coincide with that of Dr. Sims, who holds to the old theory.

The author was to-day applied to, as United States Examining Surgeon, by the Rev. B. F. Bowen, of Cold Spring, for a certificate, in consequence of a wound received in the attack on Petersburg, in 1865. He was a chaplain in the army, but, moved by a patriotic impulse, he joined the ranks, and in a charge, and when stooping forward in the act of firing, he received a wound

in the face and the shoulder. He says it felt at first as if a corkscrew were thrust into the part; then he was conscious of a terrible "concussion of the brain." He lay in front of the works from morning until night. He says that, at one time, during the probing of the wound, something like an electric shock passed from it towards the angle of the jaw, thence to the brain, and he became "*blind*" for an instant, but not syncopal or unconscious. Three times since then the same effect was produced by the same cause; when the probe reaches a certain point, at or near the bottom of the wound, or the non-fistulous tract, the electric-like sensation and the transient amaurosis occur. This operation was once done by a brother-in-law, J. W. Robathan, of Scranton; once by Dr. Stone, of Almont, Mich., a former surgeon in the army, and once by Prof. Gunn, then of Detroit. The wound has affected him seriously, both mentally and physically, and it is telling on his nervous system especially; more and more from year to year. Any attempt at manual labor affects his left arm and his brain. Sometimes, when he is preaching or lecturing, his mind, for an instant, or a few moments, is a blank, and his memory gone. The same occurs when reading or thinking. He has other singular sensations referable to the region of the heart, which are, at times, still more alarming. These almost always occur while in the recumbent posture, and just as he is getting to sleep. A sensation like a powerful electric shock passes through the heart, and he leaps out of bed in a sort of fright and bewilderment. When in a strange house, it disturbs him so that he cannot sleep the remainder of the night. During a thunder-storm, the lightning seems always to go through his heart. At times the sensation, when lying down, is not so severe, and is like a vacuity or "goneness." There are almost constant twinges, and some soreness on the injured side of the neck, shooting up *superficially* towards the scalp, but entirely different from the alarming sensations above described, and which always appear to go deeply into the brain. Mr. Bowen's general appearance is that of fair health. He is a thoroughly educated, and a very intelligent and energetic man, and a man of great fortitude.

The ball entered the left side of the cheek just in front of the line of the masseter muscle, passed inside of the lower jaw, without injuring it, downwards behind the sterno-mastoid and the jugular vein, avoiding the carotid

and other large vessels, very superficially towards the outer third of the clavicle, then between the scapula and ribs, to about the head of the lower third of the former, where it lodged. Six months after the wound was received, a soreness was observed at a point an inch or more above the junction of the outer and middle third of the clavicle, and an opening soon formed, from which two fragments of bone, from a half to three-quarters of an inch in length, were discharged. An opening still exists here, and discharges bloody pus, and sometimes, after exertion, blood.

It has been a question, the patient says, among medical men, whether the necrosed bone, which probably causes the symptoms, is the scapula or the rib. There is, I think, good reason to suppose that it is the latter, and it will now be a matter for consultation whether an explorative operation ought not to be performed with a view to ascertain, and, if possible, remove the source of irritation of the nervous system, whether it be the bone or a bullet.

I have not the space at command to comment on the many interesting features of this case, as bearing on what has gone before; especially on the cases of amaurosis previously published by the author, to which I add the experience of M. Trousseau (*Clinique Med. de l'Hotel Dieu de Paris*), who speaks of temporary amaurosis caused by the tickling of worms in the intestines of children, a very common nervous symptom of their presence being also convulsions.

S. Weir Mitchell* records two cases similar in some respects to that here related. In one, the ball entered behind the ramus of the jaw, in front of the sternomastoid, and traversed the neck to the other side. Although there was no direct injury to the brain whatever, the man fell and remained unconscious for about half an hour. He then got up and marched off to join his regiment. I cannot here even epitomize the very interesting history of this case as given by Dr. Mitchell. He ends by saying: "In the case of Mooney, the symptoms consisted in loss of memory, vertigo, cephalalgia, and presenting such a degree of gravity as to necessitate his entrance into hospital long after the cure of the wound." Symptoms not very different from those of Mr. Bowen.

* *Des Lesions des Nerfs.* Fr. Ed. Paris, 1874. Observation 58^r.

The other was the case of Captain, afterwards Commodore Stemble. Here the ball also took a course corresponding somewhat to one part of the track of the ball in Mr. Bowen's case. Entering just above the os hyoides, it passed backward and downward, on the right side, under the sterno-mastoid, and came out near the superior angle of the scapula. Here there was temporary loss of vision in the right eye, slight ptosis remaining after two years, contraction of pupil, deficiency of sweat on right side, and exaggeration of this secretion on the left side of face and neck.

Dr. Mitchell remarks that there seems to have been some disorder of the great sympathetic in this case; but that he is inclined to consider the symptoms as due to reflex action. Such is probably the explanation of Mr. Bowen's symptoms.

Editorial.

The remarks of Prof. Gross, at the late meeting of the American Medical Association, appear to have revived the blood-letting controversy, and the sharpening up of old time worn lancets has become a new professional industry in the hands of many emulous of the great surgeon's fame, but totally unappreciative of the true intent of his remarks, which was to deprecate the total abolition from therapeutics of that which, under some circumstances, judiciously used, might prove a valuable agent; and by no means originate a new brood of Sangrados, whose panacea should be depletion.

As a compensating agent for the maintenance of the circulatory balance, in danger of disturbance by these "leeches," comes another Nestor—Prof. Freer—to the front, with his transfusion tube, and defibrinating twigs, and shows not only that a liberal supply of good defibrinated blood is necessary to the life, but, better still, demonstrates the practicability and facility of supplying

deficiencies in the amount of this fluid in the vessels of the human economy, occasioned by accident, disease, or the Sangrados of the future.

But, as a further reminder of the old adage, "Blood will tell," comes Dr. J. G. Richardson, of Philadelphia, with his "high powers," and demonstrates to a Syracuse jury, that the blood of a murdered man, clinging to the sleigh of his assassin, will cry out for vengeance, even though drenched in the blood of a hog subsequently slaughtered upon the same sleigh, and washed with hot water.

Dr. Richardson's opinions upon this subject, embodied in his paper on blood stains, published in the *Am. Jour. Med. Sciences* for July, 1874, are sharply contested by Dr. J. J. Woodward, U. S. A., another microscopical authority, in a very carefully written article in the Jan. No. of the *Am. Jour. Med. Sciences*, which, as a contribution to science, is unimpeachable, demonstrating the extreme difficulty, if not impossibility, of discriminating between the blood corpuscles of man and many other mammalia, *ex. gr.*, Guinea-pigs, monkeys, seals, otters, kangaroos, capybaras, wombats, porpoises, and, more especially, dogs.

But, while the paper is faultless in itself, when compared with that which it criticizes, it looks a little like special pleading, inasmuch as comparisons are made with the blood of a different series of animals from those enumerated in the original paper. This, however, is not the most important feature in the discussion. For while it is true, as Dr. Woodward says, that we can "never affirm truthfully, on the strength of microscopical investigation, that a given stain is positively composed of human blood," which affirmation Dr. Richardson endorses, it is nevertheless equally true, that it rarely happens that microscopical investigation alone is required to decide such questions, but only to constitute one link in a long chain of testimony to which it is merely supplementary. That under these circumstances an affirma-

tive answer can be given to the question of the differential diagnosis between human blood and that of certain of the mammalia, appears to be demonstrated by Dr. Richardson's recent measurements.

A further question between these two distinguished observers appears to have arisen, as to the extent to which an expert on the witness stand is allowed to go in his explanations to a jury. Usually it will be found that he will not be permitted by counsel to transcend the limits of the facts in evidence, and their relations; and when the question is to describe the differences between the blood of a human being and that of a hog, he will not be allowed to introduce comparisons with that of dogs or other animals.

H.

Mr. Editor—A question, if you please. Given, a healthy primipara, sick thirteen hours, in a natural twin labor: could you account for her death occurring a very short time after the delivery of the last child, provided you knew she took chloroform estimated at from one to four pounds, and the second child not delivered for four hours after the first, patient complaining of exhaustion constantly?

Dr. Mesentery, the sleepy tub who waited on her, explains it, that as the labor was a dry one, the waters that should have discharged in the natural way overflowed her lungs, and drowned her. What say ye of him?

It is much easier to ask questions than to answer them. We have heard of deaths resulting from the use of chloroform, and should much prefer that solution of the problem, to the one offered by "Dr. Mesentery," viz., "that the waters which should have discharged in the natural way overflowed her lungs, and drowned her." Not being an anatomical expert, we are puzzled to know how the water could get there, *i. e.*, to "the lungs;" and, further, if this be the true reason, it suggests a danger to which "Dr. Mesentery" himself might be liable, in case he should assume the horizontal position, *i. e.*, that the vesical contents might overflow his brains and drown him.—ED.

During the past year, certain experts in neurology, residing in New York City, impressed with the belief that their special field of medical science could be more successfully cultivated by thoroughly systematizing the work, and by uniting the laborers therein under one organization, conceived a plan for the formation of an association which should embrace a large number of workers in the department of neurology in different parts of the world, who, by co-operative investigation, and periodical reunion for report and conference, might afford mutual aid and instruction, and place the science upon a substantial basis of fixed principles. For the purpose of preliminary organization, a committee was selected, consisting of Drs. W. A. Hammond, Meredith Clymer, and E. C. Seguin, who, upon consultation, invited a number of gentlemen identified with the study of neurology in different sections of the United States, to meet in the city of New York, on the 2d day of June, 1875. The invitation was accepted, with very few exceptions, by all invited.

The first meeting was held upon the day specified, and an organization was speedily effected upon an admirable plan, carefully prepared in advance by the committee previously indicated. So well had this work been accomplished that no serious objection was made to its acceptance, and, upon its adoption, the American Neurological Association became a fixed fact, with the following list of members, viz. : Dr. Schmidt, of New Orleans ; Dr. Bauduy, of St. Louis ; Dr. Roberts Bartholow, of Cincinnati ; Drs. J. S. Jewell, Walter Hay, and H. M. Bannister, of Chicago ; Drs. Miles, and Van Bibber, of Baltimore ; Drs. S. Weir Mitchell, H. C. Wood, and W. Pepper, of Philadelphia ; Dr. Hunn, of Albany ; Dr. Lente, of Cold Spring, N. Y. ; Drs. Weber, J. J. Putnam, Lincoln, and Clarke, of Boston ; Drs. W. A. Hammond, Meredith Clymer, E. C. Seguin, T. M. B. Cross, J. J. Mason, Allan McLane Hamilton, J. M. Beard, Rockwell, Arnold, Wagner, and McBride, of New York.

The following officers were elected unanimously, to serve until the next annual meeting, viz. :

President, Dr. J. S. Jewell, of Chicago.

1st Vice-President, Dr. F. T. Miles, of Baltimore.

2nd Vice-President, Dr. Clarke, of Boston.

Recording Secretary and Treasurer, Dr. E. C. Seguin, New York.

Corresponding Sec'y, Dr. Jno. J. Mason, New York.

Curator, Dr. Arnold, New York.

The membership is limited by the Constitution to fifty residents of the United States, and twenty-five Foreign Corresponding Members. Candidates to be nominated by one member, endorsed by two others, and to present a paper, which shall be referred to the Executive Committee for criticism, and to be voted for at the next annual meeting. Nineteen papers were presented, of which thirteen were read ; the remainder have been omitted solely for want of time to read, the hour for final adjournment having arrived. These will, however, all be published in the first Vol. of the Transactions of the American Neurological Association, which will appear early in the course of the current year.

The meeting of the Association was characterized by a remarkable degree of harmony and unanimity ; it was organized for work, and accomplished its mission faithfully. The uniformity of work, however, was varied by the proverbial elegant hospitality of the New York members, who entertained their associates in a style and manner unattainable outside the metropolitan city. The thanks of every student of neurological science in the United States are especially due to Drs. Clymer, Hammond and Seguin, for organizing a nucleus around which the neurological science of the future must gather.

H.

Explanation.

The June No. of the JOURNAL was complete as to matter before the departure of the managing Editor to attend the meeting of the American Neurological Association in New York. But "the best laid schemes of mice and men gang aft aglee." During his absence and before the matter was sent to press it became most marvellously deranged. The microscopic investigation of Dr. J. G. Richardson, of Philadelphia, which was a part of a report of a case of Traumatic Tetanus and an important supplement thereto, was published as an independent article, No. 1, whereas the report which it was intended to supplement, was published as article No. 3, without any head at all.

Article No. 2, "Hereditary Transmission, etc.," was likewise decapitated instead of being graced with the name of Dr. L. C. Mitchell, its author, by whom it was read before the Will County Medical Society.

We are not habitually profane, but we thought a very large d—— nevertheless, but consoled ourselves with an amendment to the old nursery rhyme, "when the cat is away the mice will play"—the devil.

H.

Prize Essay—Medical Association State of Alabama.

At the Annual Session of this Association, held at Montgomery during the second week in April, 1875, Dr. S. D. SEELYE, of Montgomery, after some remarks regarding the increasing frequency with which cases of Bright's Disease are brought under medical care in this section, the unsatisfactory though extensive literature of the subject, and the generally fatal prognosis which we are obliged to give, rendering it one of the opprobria of the profession; and believing that there is still some hidden light that may be made to illumine the subject if attention and inquiry are turned especially to it; proposed to place in the hands of this Association a prize of one hundred dollars for the best treatise on this disease, under the following regulations, viz.:

- 1st. Competition for the prize to be open to the whole country.
- 2nd. A committee of five to be appointed to adjudicate upon the essays presented.
- 3rd. All essays to be forwarded to the chairman of said committee on or before the first day of February, 1876, and to be accompanied by a sealed letter containing name and address of the author, which letter shall not be opened until after the adjudication is made.
- 4th. The Prize Essay to be the property of this Association, and to be published in its Annual Volume of Transactions; and all unsuccessful papers to be returned to the address of the authors; honorable mention being made of any deemed of especial merit.
- 5th. If none of the essays presented are deemed worthy of the prize, the committee shall have the privilege of rejecting all, in which case the competition shall be open for another year.
- 6th. The prize shall be one hundred dollars in currency, with a certificate of this Association suitably inscribed and bearing the seal of the Association; or it will be wrought into a Gold Medal or Plate with a suitable legend and a fac simile of the seal of the Association engraved thereon, to be of the full value of one hundred dollars, less the price of manufacture, at the option of the successful author.
- 7th. The adjudication shall be publicly announced at the next Annual Meeting of the Association, to be held at Mobile during the second week in April, 1876.

The above proposition having been accepted by this Association, it now invites from the thinkers and investigators of the profession at large the generous competition which its author invokes.

Committee of Adjudication.—Dr. Jerome Cochrane, Mobile, Ala., *Chairman*; Dr. J. B. Gaston, Montgomery, Ala.; Dr. W. H. Anderson, Mobile, Ala.; Dr. Peter Bryce, Tuscaloosa, Ala.

BENJ. H. RIGGS, M.D.,
Sec. M. A. S. A., Selma, Ala.

Chicago Mortality Report for May, 1875. Reported by Dr.
BEN. C. MILLER, Sanitary Superintendent.

Accident, burns	2	Gastritis	1
“ crushed	2	Gravel	1
“ chloroform	1	Hæmorrhage	1
“ drowning	5	Heart, disease of	7
“ fall	2	“ organic disease of	1
“ in planing mill	1	“ hypertrophy of	2
“ kicked by horse	1	“ rheumatism of	2
“ street cars	1	“ valvular disease of	3
“ railroad	2	Hepatitis	3
“ scalding	2	Hernia, strangulated	1
“ smothered	1	“ incarcerated	1
Abscesses	2	Hydrocephalus	8
Anæmia	1	Inanition	13
Abortion	1	Intemperance	1
Angina pectoris	1	Intussusception	1
Apoplexy	9	Insanity	1
Asthma	4	Kidneys, Bright's disease of	5
Bowels, hæmorrhage of	1	“ disease of	4
“ ulceration of	1	“ inflammation of	1
Brain, congestion of	6	Laryngitis	1
“ paralysis of	2	Leucocythemia	2
“ hæmorrhage of	2	Liver, cirrhosis of	5
“ inflammation of	5	Lungs, congestion of	6
Bronchitis	13	“ cedema of	2
“ capillary	5	“ hæmorrhage of	1
Cancer	2	“ emphysema of	1
“ of breast	1	“ paralysis of	1
“ of liver	3	Mania	1
“ of rectum	1	Metro peritonitis	3
“ of stomach	3	Measles	26
“ of uterus	3	Morbus coxarius	1
Child birth	2	Meningitis	17
Cholera infantum	7	“ cerebro-spinal	8
Consumption	72	“ tubercular	3
Convulsions	77	Mumps	1
“ puerperal	1	Metritis	2
Croup	11	Old age	8
Cyanosis	1	Paralysis	2
Cystitis	1	Pericarditis	1
Debility, general	8	Peritonitis	11
Delirium tremens	1	“ puerperal	2
Diabetes	2	Pneumonia	45
Diarrhœa	3	“ typhoid	7
Diphtheria	7	Pleurisy	2
Dropsy, general	8	Pyæmia	1
“ ovarian	1	Rheumatism	1
Dysentery	2	Scrofula	2
Embolism	1	Septicæmia	1
Enteritis	15	Small-Pox	1
Erysipelas	1	Spine, caries of	1
Exhaustion	2	“ injury to	1
Fever, intermittent	1	Stomatitis	2
“ puerperal	7	Suicide, by shooting	1
“ remittent	3	“ by hanging	2
“ scarlet	21	“ by drowning	2
“ typhoid	9	“ by coal gas	1

Syphilis.....	1	Vitality deficient.....	1
Tabes mesenterica.....	8	Whooping cough.....	4
Teething.....	6		
Trismus.....	1	Total.....	603

Premature births, 5; Still births, 61. Total, 66.

COMPARISON.

Deaths in May, 1875, 603; in April, 1875, 646. Decrease, 43. Deaths in May, 1874, 507. Increase, 96.

AGES.

Under one year.....	177	Thirty years to forty.....	53
One year to two.....	63	Forty " " fifty.....	40
Two years to three.....	30	Fifty " " sixty.....	31
Three " " four.....	20	Sixty " " seventy.....	27
Four " " five.....	10	Seventy " " eighty.....	19
Five " " ten.....	26	Eighty " " ninety.....	6
Ten " " twenty.....	26	Ninety " " one hundred.....	1
Twenty " " thirty.....	74	Total.....	603

White.....	597	Males.....	323	Married.....	193
Colored.....	6	Females.....	280	Single.....	410
Total.....	603	Total.....	603	Total.....	603

NATIVITIES.

Bohemia.....	12	France.....	1	Poland.....	2
Canada.....	5	Germany.....	74	Scotland.....	2
Native—Chicago.....	78	Holland.....	2	Sweden.....	6
Foreign, ".....	213	Ireland.....	53	Switzerland.....	2
U. States, other parts.....	114	Italy.....	1	Unknown.....	6
Denmark.....	4	Norway.....	12	Total.....	603
England.....	15	Orkney Islands.....	1		

Deaths daily, 19½. Mean thermometer, 55°.4 Rain fall, 3.64 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.	one death in	Wards.	No. Deaths.	Pop. in 1874.	Percentage.	one death in
1	6	5,725		954	11	16	14,022		876
2	1	4,830		4,830	12	16	16,792		1,050
3	18	14,861		826	13	16	17,892		1,119
4	9	15,361		1,707	14	17	16,720		984
5	25	20,078		803	15	95	45,545		480
6	53	35,916		678	16	31	21,922		707
7	55	31,722		577	17	32	20,777		649
8	38	29,143		767	18	31	21,392		690
9	42	31,654		754	19	4	4,677		1,169
10	14	17,385		1,242	20	7	8,995		1,285

Ratio of deaths to population in 1874, one death in 655½.

No. deaths in Wards.....	526	Hospital for Women and Children.....	1
Accidents.....	20	Protestant Orphan Asylum.....	1
Bridewell.....	1	St. Joseph's Hospital.....	3
County Hospital.....	12	St. Luke's Hospital.....	3
Foundlings' Home.....	17	Suicides.....	6
Hospital Alexian Bros.....	6	Total.....	603
Mercy Hospital.....	7		

THE
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EDITED BY J. ADAMS ALLEN, M.D., LL.D.: AND WALTER HAY, M.D.

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Original Communications.

ARTICLE I.

TWO CASES OF APHASIA.

By WALTER HAY, M.D.

CASE 1. *Traumatic Aphasia.* William Updegraf, æt. 40, farmer, came to Rush Medical College Clinic, Jan. 23rd, 1875, accompanied by a companion, who gave the following history of his case: Two years ago, while directing some repairs to his reaping machine, stooping to a horizontal position, watching the progress of a "bolt," which a smith was driving through a hole, he was struck upon the bridge of the nose by the end of the bolt suddenly driven through by an unusually powerful blow of the sledge. He was knocked down but recovered himself immediately, his nose bleeding copiously; soon becoming drowsy, he slept for about half an hour, when, awakening he rode three miles to his home and passed the afternoon and evening in attending to his ordinary

duties, smoked a pipe after supper and retired to bed at his usual hour. His wife was awakened before daybreak by his stertorous breathing, and finding him entirely unconscious, sent for a physician. His condition was then one of complete unconsciousness—of which he has preserved no recollection subsequently; motility and sensibility upon the right side was completely lost; face drawn to the left; deglutition accomplished only when food was placed upon the root of the tongue; fæces and urine discharged involuntarily.

At the end of two weeks, consciousness returned, together with partial control over bladder and rectum—would indicate by signs his desire to evacuate these viscera. After six weeks was able to walk, dragging his right leg, with the assistance of a cane, but was unable to utter a sound. Up to the present time, his improvement has been gradual, and, for the most part, uniform. To-day he walks with a, scarcely perceptible, limp in the right leg, the toes being slightly inverted. No muscular atrophy—is able to pick up a pin from the palm of my hand with the thumb and forefinger of his right hand while looking at the object, but when his head is turned away cannot distinguish a fold of skin from the pin; grasps my hand firmly but with little force; very slight, scarcely perceptible, diminution of symmetry in the two sides of the face; cannot whistle, but can spit straight; has perfect control of muscles of eye-lids and eye-balls; tongue deflected to right (to paralyzed side); sensibility normal on both sides of tongue and face; sight, hearing, taste, smell, normal. His speech is limited to one word, "yes," which he articulates distinctly, but in a whisper. His intelligence appears to be perfect; exhibits much good humor and vivacity; enjoys a joke, laughs heartily, but inaudibly; answers questions quickly by an affirmative nod, or a negative shake of the head, as may be appropriate; writes his name William Updgr—, but shakes his head and cannot finish it—can write the initial letter of his residence S (Sycamore), but no more;

readily distinguishes letters written in alphabetical order from those which are not. His general health is excellent, sleeps well, has a good appetite and digests his food well—bowels and kidneys act regularly.

Diagnosis—amnesic aphasia, from traumatic hæmorrhage.

Treatment—nutrition, diet, fresh air, absence of excitement, practice with the pencil daily and in the articulation of simple sounds.

CASE 2. *Aphasia from Embolism.* Rev. F—P—, S. J., a prominent official of the Jesuit Society, consulted me, giving me the following history of his case. Is an Italian, 50 years of age, having the appearance of typical health—came from a long-lived race. Has had no illness except an attack of acute rheumatism when a lad in Italy; has passed thirty years in America, principally in the District of Columbia. His life has been one of severe study, and, during nine years—while Provincial of his Society—of great care. Eighteen months ago while celebrating mass at the altar of the church, found himself suddenly deprived of speech, to so great a degree that he was compelled to indicate his wishes to his servitors by signs. Had great difficulty in raising his right arm and hand. Retained sufficient self-control to finish his mass, although occupying about three times as long as usual. The loss of power in the right arm was also apparent in the leg, and was accompanied by numbness, pricking and tingling.

After the lapse of six months began to recover his faculty of speech, together with motion and sensation in the extremities, which had been only partially lost. He has now so far recovered, as to be able to walk with little perceptible difficulty; to write, although slowly and with care; to converse clearly upon any subject, but slowly and thoughtfully.

The most remarkable feature in the case, is the total obliteration from memory of certain items of acquired

knowledge, previously in constant use ; for example, he has forgotten entirely the "credo," being unable to recall a single word of it beyond the first. Murmur with regurgitation at the base of the heart.

Diagnosis—Embolism of left middle cerebral artery, from rheumatic endocarditis. Had been treated with K. Br. freely. Advised rest, mental and bodily, easy traveling and nutritious diet.

No. 163 STATE STREET.

ARTICLE II.

THE CHEAPER CINCHONA ALKALOIDS.

By JAS. S. WHITMIRE, M.D., METAMORA, ILL.

For several years we have been convinced that it would be to the material interest of the medical profession, everywhere, to pay more attention than has heretofore been done to the use of the cheaper cinchona alkaloids, and this should be the case, more especially with that portion of the profession who reside in the rural districts and country villages, where they are compelled, almost from necessity, to furnish their own medicines. There are several reasons why this should be done, amongst which is the well known fact, that the forests of the different valuable species of the cinchona tree are becoming greatly decimated ; and though there is still an abundance of the bark for the world's supply, yet the time is not far distant when the States of South America, where the tree is indigenous, will institute measures for its preservation, and this will necessarily shorten the supply of the bark. We understand that such measures have already been instituted in Chili and Bolivia. It is true that the Dutch in Java, and the English in the East and West Indies, have been successful in acclimatizing some of the most valuable species of the cinchona tree, and have already begun to make the bark from their plan-

tations a commodity of commerce ; yet, with the wholesale destruction of the tree in its native mountain wilds, for the procurement of the bark for the purposes of commerce, it must, sooner or later, be decimated to the minimum amount, so that the supply will necessarily cease to be equal to the demand. This may not prove to be the ultimate result in our day, but we—the profession—who claim to be humanitarians, should look with a jealous eye, not only to our own pecuniary interests and physical well-being, but the welfare of those who are to come after us and fill our places for a brief period should be kept constantly in view. Another reason why we should pay more attention to the use of these cheaper alkaloids, is that either or all of them are relatively cheaper than quinia, even though two of them have to be used in larger doses than the latter drug to accomplish the same results ; besides, so far as our experience has been connected with their uses, we have not the least question of their utility as a substitute for quinine under nearly all circumstances where the use of the latter drug is indicated.

With the above prefatory remarks, we now desire to state that we have used all of them, excepting cinchonidine, in our practice for several years. We first used sulph. of cinchonia, next sulph. quinidia, and third, the sulph. cinchonidia ; and even the residue—chinoidine—which is evaporated to dryness from the mother waters after the crystalizable salts have been separated, has been utilized in our practice, as a prophylactic against the recurrence of intermittents. We seldom make use of the sulph. cinchonia—which we have used for the longest period—as an antiperiodic, or antipyretic, because of its tendency to nauseate the stomach, but, nevertheless, we are convinced that it possesses valuable febrifugal and antiperiodic properties, and may be advantageously utilized for such purposes in the absence of either of the other preparations of the bark. Notwithstanding its nauseating qualities, we usually make it available as a

general tonic in connection with the mur. tinct. of iron, especially at times when a chalybeate is indicated—a condition which is seldom absent after an attack of intermittent or autumnal fever ; and we find it to be, to the full as efficient in this respect as quinia, or any other of the bitter tonics ; besides, it has the advantage of acting as a prophylactic against the recurrence of a chill. Our usual prescription, under the circumstances just mentioned, is this:—℞. Cinchon. Sulph. 3 j-ij ; Ferri. Mur. Tinct. 3 j ; Syrup. Simp. 3 iij. S. One teaspoonful, in water, at each meal. This is an admirable tonic, and may be used with advantage in anæmia and other debilitated conditions. The sulph. of cinchonia, in bulk, costs about thirty-five cents per ounce.

The sulph. of quinidia we have used to a greater or less extent in our intermittent and remittent bilious fevers ever since it was first thrown upon the market. This alkaloid, though in fact but little cheaper than quinine, we have found equally efficacious as an antiperiodic and antipyretic as the quinia sulph., though it must be used in a little larger dose than the latter drug. As an evidence of its value in some of the periodical neuroses, such as that commonly known as sun-pain, we have frequently administered it with as prompt relief to our suffering patients as we have ever known to be produced from the use of our sheet-anchor—quinine. As an example, my wife for many years has been subject to this distressing intermittent or periodical neuralgia ; she was greatly opposed to taking quinine on account of the tinnitus aurium and other distressing symptoms that it produced. Now, under these circumstances, while twenty-five to thirty grains of quinine may have been sufficient to interrupt the paroxysms of pain, I administered to her forty grains of the quin. sulph. in the course of twelve hours, which completely warded off the attack and did not subject her to the disagreeable after effects, to that extent that the use of quinia is wont to do. This drug (quinidia) costs in the market about \$1.63 per ounce,

but the dose required being nearly or quite one-fourth larger to produce the same febrifugal effect as that of quinia, it makes the expense but very little less than the latter drug. But if its febrifugal and other qualities be equivalent to that of quinine in proportional doses, why not use it more extensively, especially in our milder malarial fevers, so that the demand for quinia will not be so great, thus cheapening the article of quinine, and, at the same time, preventing the wholesale destruction of the bark that has been going on for years for the production of a sufficiency of quinine to supply the world's demand?

The last of the alkaloids—sulph. of cinchonidia—though *not the least*, comes up for our consideration. This article has not been so long upon the market as the latter alkaloid, in fact, it has not till within a few months been brought more than casually to the notice of the profession, but because its introduction has been of but recent date, there is no reason why those who have seen fit to test its medicinal virtues and give it a fair and impartial trial should be treated so cavalierly when they attempt to call the attention of the profession to its value as a remedial agent. It is our object in this paper to call the attention, especially, of country practitioners to the unqualified value and merits of this drug as a tonic, febrifuge, and antiperiodic. So far as our experience has gone with the use of this alkaloid—cinchonidia sulph.—we are disposed to attribute to it, very nearly, if not quite, an equivalent therapeutic value with that of the sulphate of quinine. We have used it in the same doses—ten to twenty-five grains—with complete success in interrupting the paroxysm of intermittents; we have administered it, in connection with morphia, to dispel the malarial complications that sometimes occur in pneumonia with satisfactory results; and, in acute rheumatism, we have substituted it for quinia, whenever the latter drug seemed to be indicated, with unequivocal benefit. We have had this spring (1875) in this vicinity more than a usual amount of malarial or periodical

diarrhoea and neuralgias, both among children and adults, for the relief of which we have been in the habit of prescribing the sulph. cinchonidia, with other appropriate remedies. In these cases the same amount was given as that of sulph. quinia under similar circumstances—we seldom or never had to repeat the dose—and its administration was attended with the most complete and satisfactory results.

This article—cinchonidia sulph.—can be obtained by the quantity for from seventy-five to eighty cents per ounce, and, therefore, we would respectfully ask the question: If the value of this agent as a tonic and febrifuge is equivalent, or nearly so, to that of quin. sulph., and its commercial value is only one-third of the latter, is it of no concern to the country practitioner, who has to furnish, at great expense, annually, his own drugs, not only to the wealthy, but to the indigent from whom he never expects to receive one farthing for his services, and for whom he labors solely for the sake of suffering humanity, for the answer of a good conscience, and the gratitude of his beneficiaries?

We would not use these cheaper remedies merely from mercenary motives—no one could conscientiously do so; but we would, and do, prescribe and use them because we believe them, in equivalent doses, to be of the same therapeutic value as that of quinia, and that they may be safely used as a substitute for it; and, in so doing we are treating our patients well, and, in not a few instances we are not only contributing our medicine and our services to the poor, but we are rendering good service to the general health and comfort of our patients, and saving to ourselves the difference in the cost of the drug used, which would amount to no mean sum in the course of the year, and which the country physician so much needs, because, at best, his life is a hard one, and few there are, indeed, who make any more than enough, from year to year, for the economical support of themselves and families.

Chinoidine, the residual product of the mother waters, we have used for more than twenty years as a prophylactic against the recurrence of intermittents. The most eligible form in which we have been able to prepare it for use, is to finely powder the resin and then add a sufficient quantity of calcined magnesia to prevent the powdered resin from running together, then thoroughly rub them in a mortar and afterwards bottle. Of this powder we give from three to four grains after each meal, for one day; on the next, we administer ten drops of Fowler's solution, in water, after each meal; and so continue alternating the medicines for four or five weeks, when every vestige of malarial influence will be found to have vanished. Of course, we always first interrupt the paroxysms by the use of one or the other of the salts of the cinchona alkaloids.

In case these directions are strictly carried out, there will not be three per cent. of relapses, while there are more than thirty per cent. where the prophylaxis is not used. Chinoidine, used in this manner, is by no means a disagreeable medicine, because it is but slightly soluble in either saliva or water, hence it may be given to children in syrup with but little or no complaint.

ARTICLE III.

SUCCESSFUL OPERATION FOR STONE IN THE BLADDER.

By E. O. GRATTON, M.D., HEBRON, ILL.

On Tuesday, Feb. 23d, 1875, I was called to see Mrs. Betsey Lovejoy, of Genoa Junc., Wisconsin, aged about 43 years. Found her suffering with stone in the bladder.

Called twice between that and Saturday, the 27th, at which time I performed the operation of lithotomy, with

the assistance of Dr. Woodruff, of Harvard, Ill. The stone, weighing five and one-half drachms, was taken out by dilatation, with cutting about two lines of the external sphincter.

The patient is, at this date, July 13th, as well as before the growth commenced, following her usual avocation, which is that of a seamstress. She has had no trouble to retain the urine from the first.

Progress in Medical Sciences.

ARTICLE I.

PROGRESS OF SURGERY.

By JNO. E. OWENS, M.D.,

LECTURER ON SURGERY, RUSH MEDICAL COLLEGE, CHICAGO.

1. Treatment of Epistaxis. By Dr. BEVERLEY ROBINSON, of New York. (*Medical Record*, March 20, 1875; *The Monthly Abstract of Medical Sciences*, May, 1875.)

2. Division of the Isthmus to relieve Dyspnoea in Certain Cases of Bronchocele. By Sir G. DUNCAN GIBB, Bart., M.D., Physician to Westminster Hospital. (*Lancet*, Jan. 23, 1875; *The Monthly Abstract of Medical Sciences*, May, 1875.)

3. Removal of Goitre; Previous Ligature of Arteries. By Mr. LISTER. (*Brit. Med. Journal*, March 13, 1875; *The Med. News and Library*, May, 1875.)

4. Action of Salicylic Acid in Bacteria. (*Brit. Med. Journal*, March 6, 1875; *The Med. News and Library*, May, 1875.)

5. A Clinical Contribution to the Treatment of Tubal Pregnancy. By T. GAILLARD THOMAS, M.D. (*New York Med. Journal*, June, 1875.)

1. Dr. Robinson recommends, in obstinate epistaxis, compression of the facial arteries upon the superior maxillary bones, just before they reach the alæ of the nose, by means of two small pads made of lint. These are sewed to a piece of tape, the ends of which are

passed across the cheeks and above the ears, and tied securely behind the occipital bone. Arrest of all cases of bleeding from the nose, by compression of the facial arteries is not claimed. The author trusts that this method may frequently be adjoined to other treatment with marked benefit to the patient, and by itself may prove of the greatest utility in exceptional circumstances where other means are not at hand. Dr. Robinson asserts that many of the worst cases of epistaxis originate in the septum, which receives its arteries mainly from the terminal branches of the facial.

2. The method suggested by Dr. Gibb has for its object the relief of dyspnoea from pressure upon the trachea in cases of enlargement of the thyroid gland affecting one or both lateral lobes, and implicating the isthmus. When the latter is enlarged, dyspnoea usually becomes a feature of great significance and the precursor of future mischief. If not relieved by treatment, the enlarged lateral lobes may extend on either side of the trachea itself and completely encircle it. In consequence of this, the tube is compressed laterally, and its form becomes oval, with a very narrow passage to breathe through. Such cases sooner or later end fatally. In the first case cited, the autopsy revealed the fact that a narrow oval fissure was all that the patient could breathe through during life. However, in some of our hospital museums, says Dr. Gibb, the preparations themselves show how hopeless are all means of cure when once the trachea is grasped by the tumor. Having long thought over the matter, he came to the conclusion that the only remedy in such cases is to remove or divide that portion of the bronchocele which was in contact with the trachea itself—the isthmus—*before* it had commenced either to encircle the tube or had become too firmly adherent to it. The second case reported illustrates the truly wonderful relief afforded by the operation.

In this case, under the influence of chloroform, an

incision was made through the integuments in the median line over the trachea, about two inches long, the superficial fascia and then the deep were divided on a director, and finally, the surface of the tumor was exposed, which in size approached that of a flattened walnut. The isthmus on either side of this was more slender and smaller in bulk than the tumor, which, by means of an aneurism needle, permitted the application of a strong ligature on either side of it. The isthmus was then freed to the inner side of each ligature, divided, and wholly removed, the trachea being observed to be quite free.

There was not much bleeding, although several small veins ramified on the surface of the tumor. Subsequent examination showed the removed isthmus to be partly cystic in its character. The results in other cases fully justified the hopeful view entertained of the operation.

3. On the 6th of March, Mr. Lister removed a goitre from a young woman, having previously ligated the four principal arteries of supply to the thyroid, through a central incision, before the operation of removal was attempted. This has been found most effectual in restraining the hæmorrhage, which, without this precaution, is so serious a drawback to the operation. The patient is doing well.

4. Dr. Ludwig Letzeritz has lately tested the effect of salicylic acid on bacteria and micrococci, by placing under the microscope portions of fluid containing these organisms in abundance, and allowing solutions of salicylic acid to come into contact with them. He used solutions of four degrees of strength, viz., one part of salicylic acid and one of spirit, in 120, 90, 60, and 40 parts of water. The first two arrested the movements of the bacteria gradually; while, with the two stronger solutions, the arrest of movement was instantaneous. Although he has used it locally and internally with some

benefit in diphtheria, he observes that more extensive observations are necessary in order to determine its value in that disease.

5. I can only refer to that part of Dr. Thomas' interesting paper which describes the brilliant operation but recently performed. Before detailing the treatment of the case, he remarks that few cases of extra-uterine pregnancy have, during their early and progressive stages, been brought to a favorable conclusion by surgical means. For this, he sets forth four good reasons: 1. The doubt which usually attends diagnosis; 2. The danger of attending invasion of the peritoneum; 3. The dangers arising from septic absorption from retention of the foetus or its envelopes; 4. The certainty of grave hæmorrhage from opening into the extraordinarily vascular nest in which the foetus is contained. To meet the indications, one of the following plans has been generally adopted: 1. Gastrotomy has been practiced, that the foetal mass might be removed like an ovarian tumor; 2. The liquor amnii has been drawn off by a very delicate trocar, in order to diminish tension and check the growth of the cyst; 3. The foetus has been killed in situ by the passage of strong currents of electricity, or the injection into the sac of strong narcotics, like atropia or morphia, with the hope that nature might eventually cause its discharge, with the contents of the abscess which it usually creates.

The first procedure is attended by the dangers of peritonitis and hæmorrhage; and the second and third by those of hæmorrhage into the sac, septicæmia, and subsequent formation and discharges of an abscess located just under the peritoneum. By the process proposed and adopted by Dr. Thomas, he hoped to avoid the dangers of peritonitis by opening the foetal sac by the vagina, passing up to it between the folds of the broad ligaments. He seeks to prevent hæmorrhage by cutting into the sac by means of a knife rendered incandescent

by a powerful current of electricity. By the complete removal of both foetus and placenta; and by drainage of the sac, and by the use of carbolized injections through a tube of glass or silver, kept in it, and discharging its contents by the vagina, he avoids septicæmia. Dr. Thomas has put the plan to the test in the following manner:

The patient having been ætherized, was placed upon a table before a window admitting a strong light, in the left lateral position, and Sims' speculum introduced. Through this the cyst to the left of the uterus could be distinctly palpated. Now, fixing a long-handled tenaculum in the cervix uteri, and another in the vagina, near the left ilium, this part was by them put on a stretch so as to make of that side of the canal a triangle, the base of which was over the cyst, and the apex at the vulva. Taking the platinum knife of the galvano-caustic battery, which was brought to a white heat, the operator now passed it gently over the base of the triangle described as created in the vagina, carrying it from one tenaculum to the other. By repeating this the vaginal wall over the lower segment of the cyst was slowly cut through. In six minutes the cyst was opened by the incandescent knife, and a straw-colored, slightly pinkish fluid was thrown out with considerable force. Thus far no blood whatever had been lost. With the index finger in the cyst, the foetus was felt lying horizontally, with the head towards the ilium and the feet towards the uterus. The steps of delivering the child exactly resembled those adopted in ordinary podalic version. The final delivery of the head was facilitated by the employment of a pair of long-handled placental forceps. The cord was then cut, and an attempt made to deliver the placenta by gentle traction, and detachment, as is done after ordinary labor. At this point, the first difficulty showed itself. When a little over half of the placenta had been separated, a very severe hæmorrhage took place, and so much was the patient's condition depreciated by it in the two

or three minutes of its duration, that the operator was unwilling to delay for the removal of more. Tearing the detached portion off, a large gum-elastic catheter was passed into the sac and the latter injected with a solution of the persulphate of iron. The flow of blood was instantly checked, but the sac was left full of coagulated blood, and the remains of the placenta. A long tent of carbolized cotton, saturated with a solution of persulphate of iron, was substituted for the drainage tube. All went well till the evening of the fourth day, when symptoms of septicaemia showed themselves. These yielded to constantly repeated injections of carbolized water, at the end of a week. On the fifteenth day the remaining portion of the placenta came away spontaneously. On the sixteenth day evidences of an embolus in an unimportant vessel of the arm showed themselves, which created a small abscess. Ten weeks after the operation, Dr. Thomas had the satisfaction of seeing his patient in her parlor receiving company.

Reports of Societies.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, June 28, 1875.

(Reported by E. WARREN SAWYER, M.D.)

Dr. McKennan was elected to the chair *pro tem*.

Dr. DeWolf reported a case of rare disease of the muscular structure. The subject was a boy of fifteen years, whose previous history presented nothing unusual; he had worked in a cotton factory since the age of twelve. During the later months of 1871, he complained of a weakness in the legs and back; his mother observed that the calf of his legs were swollen. In June, 1872, he was first seen by Dr. DeWolf, when the follow-

ing was noted : entire groups of muscles, as of the extensors of the foot, gastrocnemii, glutei, the erector spinæ, and those over the scapulæ, had increased in size, much beyond their usual volume. The enlargement was uniform, and the form was preserved. Photographs were exhibited, showing very noticeable enlargement of the calves. He was able to stand alone only by arching the back strongly, in order to preserve the centre of gravity. Cutaneous sensibility perfectly normal. The muscles responded to the electric current, though less readily than usual. During the fall of 1872, he was confined to the bed and was unable to turn himself ; began now to complain of an ache in the anterior part of his chest. From month to month, the muscles of the upper extremity and chest were observed to become firmer, and to lose their contractility, the abdominal muscles remaining natural. The respiratory function became more and more impaired, until death, which occurred in February, 1873. The functions of the brain, digestive apparatus, heart and kidney, were normally performed to the end.

The *post mortem* examination was necessarily limited to the removal of small bits of muscle from various regions. "The apparent hypertrophy of the muscles was produced by a complete permeation of the tissue with fat, in which, however, the muscular fibre remained small and rather pale, but not affected with fatty metamorphosis." Not a simple accumulation of fat between the bundles of fibre which made up the muscle, but each muscular fibre was separated from its neighbor by a row of fat cells. "In the tissue of the shoulder, arm and forearm, a still rarer form of change had taken place. The tissue was devoid of fat, but there existed a very marked hyperplasia of the connective tissue. Thick septa, of what I conceived to be newly formed connective tissue, were interposed, not only between the primitive fibres, but between the secondary bundles of fibres, and between the muscles themselves. The muscular fibre was small,

with here and there a granular appearance, but I did not observe any true fatty degeneration."

The writer then reviewed very extensively the literature and reports of analogous diseases.

In answer to Dr. Sawyer: the muscles of mastication and those of the throat were not involved. The patient died from inability to keep up the respiratory act.

The paper was further discussed by Dr. Bannister and others.

Dr. Thoms, of New York City, made some interesting remarks upon "floating hospitals," giving a history of the system, and the great benefits which have been experienced from it by hundreds of children of New York. The Dr. hopes soon to give a practical illustration of its advantages by sending a hospital boat upon Lake Michigan from our own city.

The remarks were discussed by Drs. Bartlett, Owens, DeWolf, and others.

CHICAGO MEDICAL SOCIETY.

Transactions at Regular Meeting, June 21st, 1875.

The President, Dr. William E. Clark, in the chair.

In the absence of the regular reporter, Dr. Charles Warrington Earle was appointed for the evening.

The minutes of the preceding meeting having been read, and certain preliminary business transacted, the following paper by Dr. Norman Bridge was read:

Do Mental Emotions in a Pregnant Woman produce Deformity in her Child?

The medical profession have given little attention, in the way of direct study, to this subject. A few essays have been written, and a goodly number of cases bearing upon the question recorded, but most students when cornered for a positive opinion have evaded the point, and

given a statement that concedes the possibility of both or either side being correct.

But there is a widespread popular belief that all kinds of deformities may come to unborn children, all kinds of marks and disfigurements, from such causes as a fright, an erratic thought, or any sudden, unusual or marked mental impression made on the mind of the gestating mother.

Reports of thousands of cases of such sequence pass from mouth to mouth among the people, and every case is so convincing in its minute and accurate statements that few people presume to doubt the truth of the laws they seem to be governed by.

Many good and conscientious physicians join in this belief; they believe that they found their opinions on fact. This adds to the strength of the popular opinion vastly, for it always happens that a few of the choicest minds in a community will always follow the opinions of their cultivated doctors. So general is the popular belief in the possibility of damaging the child by wrong mental emotions on the part of the mother during its intra-uterine life, that there is a quite general carefulness on the part of pregnant women against excitement and mental disturbances of all kinds and in favor of a peaceful, tranquil and happy passage through this period of woman's experience. In deference to this opinion, too, and in addition to the natural instincts, husbands and friends are more considerate and careful of gestating women.

All this is most proper and commendable. But as a consequence of the belief, it often happens that women who know they have experienced profound and often painful emotions during the early months of pregnancy, are made more than miserable through the remaining weeks for fear their children *will* be deformed or marked. The expressions of this suffering are the frequent observation of every physician. The suffering is often severe

and distressing ; it amounts to the worst possible mental agony.

I feel certain that in the aggregate the worry and suffering on this account, far exceeds that from any fear of the dangers and uncertainties of parturition. Whatever the preventive effect of this popular belief may be, the consternation on the part of gestating women for fear injury *has been done*, is a hardship so common and so appalling that I think it ought to be a subject of study with the profession whether there is any good ground for the notion.

If it is untrue, it comes to be almost a criminal cruelty to aid in its propagation. If it is untrue, it does no good ; while the injury it works is so considerable that no word should be spared against it.

If it is true, of course it should not be denied ; but then in that case it is a proper question whether the evil it does is not so much greater than the possible good, that anything that will aid the spread of it is unjustifiable. We study to avoid having patients with mortal diseases for months before death become fully aware of their incurability. Human peace and happiness are so precious a boon that we evade the queries of these unfortunates and laugh at their misgivings, and divert them with conversation and attentions and gifts. Why not then, if the belief in question be true,—why not fill the heads of people with so much beside, that they cannot think of it ; why not switch them off from their musing on the subject and laugh at them for their devotion to a questionable notion that can only stab them ?

But the personal belief of the writer hereof is against the truth of the conviction ; and this is so strong and positive that it makes the popular view assume an aspect not creditable for scientific people to hold, and betrays him, in characterizing it, into the use of language that is sometimes neither becoming in him who uses it nor respectful to the people it hits, who are too often his professional seniors.

Dr. G. J. Fisher wrote some years ago an article opposed to the idea that mental emotions in gestating women cause deformities in their children. He declared that most women during gestation have intense emotions and may see sights of awful and horrid character, yet deformed children are few ; furthermore, in many cases, that is, where there was fright and no deformity, the mothers have expected their offspring to be monstrosities. I think any candid observer would say he has known of twenty women who had seen sights or had emotions and expected their babies to be deformed at birth, to every one who had borne a deformed child. "Like causes produce like results, yet the most widely dissimilar causes are assigned for the same deformity." All sorts and grades of emotions are invoked to explain a given deformity, and the emotions and their causes frequently have nothing about them to suggest the deformity. When a woman sees a hog with its throat cut and bears a child with a red mark on its throat, the theory of cause and effect looks plausible ; but when the same kind of a fright is offered as a cause of an idiotic child, our concurrence may fairly be reserved. I have no doubt that in a majority of cases "the most widely dissimilar causes are assigned for the same deformity."

In a large proportion of the malformations no explanation is offered by the parents. Is it possible that so vivid emotions as can cause such deformities as we are told about and see, can be so easily forgotten by parents who are human ? Mankind all love mystery and wonderful occurrences !

There is no doubt that in very many cases, probably four in every five, the explanation of a deformity by a mental emotion is an afterthought. *After* the birth of the child reveals a deformity, the woman asks herself if she had not seen a sight, been frightened, or had some other emotion, and of course it is easy to recall such a circumstance. I believe the cases where an emotion has occurred and a deformity is expected and it really occurs, and of a

character that could possibly be suggested by the nature of the emotion, are almost unheard of, and further, that in not one in a thousand of the reported (popularly reported) cases that are all remembered and circulated, are all these points inquired into. But the most awkward inconsistency of the claim that such things are possible is the fact that the date of the deformity of a part due to an emotion that occurred at a known period, is frequently *after* the part in the course of foetal development must have been formed. A woman sees a man who is minus one leg, she is in a stage of pregnancy many weeks past the time when the lower extremities of the foetus are known to be fully formed; the baby is born maimed in one of its legs.

If the sight caused the deformity, there must have been a veritable amputation. Well, Dr. Seguin says, I believe, that mental emotions may cause amputation of parts of the foetus in utero. But has he or anybody else ever discovered the amputated limb? If fingers, toes, ears, arms and legs are amputated in the later months of utero gestation, what becomes of them?

Seguin says also that deep gashes (wounds) may be made in the foetus by mental emotions in the mother. This might be supposable could it be demonstrated that nerves connect the spinal cord of the mother directly with that of the foetus. Dr. Tuke mentions some cases where mental emotions in sensitive people have led to great textural changes in the parts of the individual on which the mind was directed. But no such nervous connection has ever been made out, and it is denied on authority.

Dr. Fisher declares that malformations identical in kind and degree recur often in the human subject and admit of classification, and that they have their exact morphological counterparts in the lower animals, as well as some that are analogous in the vegetable kingdom.

Note the frequency with which cleft palate and hare-lip occur, and spina bifida. Would any one claim that

these defects are due to mental emotion in the mother during utero gestation?

[The Doctor here quoted a large number of cases from the writings and observations of such men as Tuke, J. L. Smith, Hammond, Dalton, Carpenter, Brown-Sequard, and others, resuming his paper with the following apology and enumeration of cases in his own practice.]

I may be pardoned in referring to a few cases that have come under my eye and to my knowledge in the slight experience I have had in this branch of medicine.

Mrs. G. M. D. after a peaceful and tranquil pregnancy gave birth to a child with a spina bifida. Both parents were healthy, and there had been no unusual emotions. The woman was the daughter of a physician. One child before and one since have been born and both perfectly healthy.

Mrs. —, a healthy young woman, after a pregnancy marked by no emotions but those of perfect happiness, gave birth to a spina-bifidous child. She has since borne a healthy and normal child.

Mrs. —, on the very day of the birth of the last mentioned deformed child, brought forth a child absolutely without a blemish. In the early months of the gestation she had seen her own husband kill a man, and had from that moment been unspeakably miserable in the firm belief that her child would be deformed.

On the 2nd of May, *ultimo*, Mrs. K. was delivered of her first child. She is a sensible woman but a sensitive one, and lived through most of her pregnancy in the active fear that her child would be a monster, because she had seen a dead-born, half-grown foetus in the earlier months of her gestation. Her child, so far from being a monster, is the embodiment of beauty and symmetry.

These cases are gathered without effort. Nearly every member of the profession, if he will recall cases that have fallen under his observation, could muster a much larger

array than I have—enough, at least, to convince him that the theory in question is a chimera.

But it is urged that, as the first offspring of the mother in a measure determines the character of her after issue, it somehow explains or establishes the theory we are discussing. It is known that children of a second marriage often resemble the first husband, provided the first marriage has been fruitful. A negress bearing her first child to a white man, bears light colored children afterward to a black man.

We are told a Zebra once impregnated a mare who afterward bore striped colts.

Stock raisers discard a mare or cow for the raising of blooded stock if she has borne the first offspring to an inferior animal.

Now it is claimed that these facts prove that the most wonderful influences can be carried through the mother's blood to the child in utero; that such is the manner of the effect made on the later offspring referred to.

But it is not proved, and it is highly improbable, that the mother transmits the qualities of either her father or her former husband to her children through the medium of her blood: It is far from rational that the resemblance of the product or offspring to the parent—characteristic of all animals and plants—is transmitted directly through so accidental and mutable a thing as the floating medium called blood. What of the animals that have no blood?

The blood is accidental; *cells* of tissue are all potent and constant, and *the*, and the only characteristic, cells reproduce their kind; nothing else on earth does.

If a woman bears children resembling a former husband, it simply *must be* because her tissues, not her blood, probably the ova in her ovaries, possibly her uterus, have had their characteristics changed by her former pregnancy.

The fact is, the only rational view we can take of the subject in the light of all our teaching on physiology and pathology is, that when a deformity or monstrosity

occurs, it is due to either an abnormal state of the generative matter of one or both parents at the beginning, or to some obstruction to the normal development of the foetus. Development may be retarded—may be excessive, or perverted. A thousand different forms of disturbance might occur and each be capable of interfering with perfect development. There might be too much or too little blood supplied the foetus; the quality of this fluid might be abnormal in countless ways. Accidents may occur, blows and falls. There may be frequent attempts at miscarriage, or the mother may be syphilitic or may have some acute disease. The maternal organism may be abnormal; so may the membranes, or the cord—indeed, it would be useless to attempt to give all the influences capable of arresting or disturbing the development of the ovum.

Mental emotion is such a cause; that is, it is a cause of disturbed nutrition, able to work a failure of a perfect development of the foetus. It may act on the foetus as it does on the stomach of the individual; if it disturbs the character of the blood, all parts of the body of the mother and of the foetus alike would suffer in some measure.

But mental emotion does not act through the blood to disturb, in the most wonderful manner, a particular part of the body of the foetus, the part varying according to the particular mental impression. To endow the blood with such wierd intelligence as this would require, is too great a load for our credulity. There is no philosophy in the theory that it so acts; all the truths of anatomy, physiology and pathology are directly against it. It is in nature more nonsensical than the theory that the decillionth of a grain daily of sulphur will cure hip-joint disease. It has nothing in its favor except the fact that in an occasional case a deformity occurs as, judging from an emotion really experienced, the mother expected it would. But the cases of this kind are no more frequent than, by the rule of possibilities, the mathemati-

cians would tell us they must occur in the course of events, as the inevitable accident, the coincidence. By a similar system of figuring, they would aver that, in a large and busy city like Chicago, with all the dangers incident to travel and business, and with the native human carelessness in the face of familiar dangers, out of each quarter million of people a given number would be sure, each year, to have their legs broken, and they would undertake to tell us whether most of the fractures would be on the right or left side of the body.

But if the popular belief is true, it is so near a falsehood that, in the interest of pure humanity, the profession ought to turn their faces against it.

The profession ought everywhere, and on all occasions when the subject is broached, to deny the probability of the notion.

From beginning to end the belief partakes of the nature of stories that are published in newspapers, and pass from mouth to mouth, growing as they go; which have no philosophy or reason for their foundation. They start out of the necessity on the part of little thinking people of hatching up some single and tangible cause to explain every peculiar occurrence, regardless of whether such be *capable* of explanation, out of the towering necessity of having a scape-goat for everything; they are remembered and retailed to everybody, and enlarged, through the mania, on the part of the same little thinking people, for always having some wonderful thing to tell or to hear.

The profession ought to be no longer chargeable with propagating such a delusion.

In the discussion which followed the paper, Dr. Paoli, misunderstanding the ground taken by the author, referred to many of the foolish theories believed by the people, and placed the opinion received by many, that mental emotions in the pregnant mother produce marks and deformities in her offspring in the same category.

Maimed men, many of whom we knew since the war, marry and beget healthy and perfectly formed children. He believed that bad air, bad hygienic regulations, bad nutrition, etc., were the causes which produced the deformities mentioned in the paper.

Dr. Hutchinson—than whom there is no one more able—recalled the biblical knowledge of the Society. He spoke of the efforts made centuries ago, to produce certain peculiarities in the offspring of the lower animals. He could not give a reason why children were born deformed and marked, but thought it was bad nutrition. The same speaker related cases in his own practice, where the birth of deformed children were followed by the perfectly formed and healthy.

Dr. J. S. Knox remarked that it was an established fact, he believed, that no nervous connection existed between the mother and child. Any deformity existing must be the result of bad nutrition.

Dr. Lee related the history of several cases of marked and deformed children, giving the reasons assigned by the parents.

Dr. Engert believed that deformities were inherited the same as family resemblances.

Dr. Stevenson believed that certain members of the profession had strengthened the opinion in the minds of the people, and referred particularly to a novel published some years ago, the author of which was not only a physician but a gentleman of rare literary acquirements. The book represented * * * * * and had a large sale, and undoubtedly influenced the people to a considerable degree, coming, as it did, from a physician. It seemed to her much easier to explain marks and deformities than to account for hereditary transmissions.

The President said that it was not wonderful that the people believed deformities, etc., were produced by mental emotions; indeed nothing was too outrageous as not to find some to readily accept it. Men carried dried potatoes in their pockets for years, and believed them a

sure preventive against rheumatism. Horse-shoes were displayed above the doors, in dwellings, where in every thing else the occupants appeared rational and sensible.

The medical delusion, Homœopathy, was advocated and championed by many who, on all other subjects, seemed to be possessors of a well balanced and cultivated intellect.

At a late hour the Society adjourned, to meet in three weeks at the residence of the President.

WISCONSIN STATE MEDICAL SOCIETY.

29th Annual Meeting.

The 29th Annual Meeting of the Wisconsin State Medical Society opened at the Assembly Chamber, in the Capitol, at Madison, Tuesday evening, June 1st.

Owing, doubtless to the stormy weather yesterday and last evening, there was but a thin attendance.

The meeting was called to order by the President, Dr. J. T. Reeve, of Appleton, at whose invitation, Rev. Thomas Bright, of this city, offered a prayer. Music by the Lake City Band followed, after which the report of the Committee of Arrangements was called for, and in the absence of Dr. Brown, chairman of the committee, Dr. Wm. Fox read the programme of proceedings as fixed upon by the committee. He also added that the members of the Society had been invited by Dr. McDill to visit the Insane Hospital, Wednesday afternoon. He had arranged with the Railroad Company for special trains to carry them to and from the Hospital. Dr. Fox also said that a steamboat excursion upon our beautiful lakes had been arranged by the committee.

On motion of Dr. J. B. Whiting, of Janesville, the report of the committee was adopted.

The Secretary, Dr. Nichols, of Milwaukee, then called the roll of the members of the Society, some fifty answering to their names.

President Reeve then proceeded to address the Society, expressing in the outset his great regret that Dr. Kempster had been unable, on account of sickness in his family, to be present and deliver the lecture which had been expected of him. He tendered his acknowledgments to the Society for having done him the honor to choose him their President, and he hoped the meeting would result in the development of the most friendly feelings among the members. The Society was organized in this city a third of a century ago, and he congratulated its members upon the progress it had made and the good it had accomplished since then. He traced the history of the practice of medical skill from the early ages, when the sick were exposed in the market places, when the priests were the only physicians, and superstitious rites their practice—a state of things that had lasted for 2,000 years, till the time of Esculapius, whose skill in the healing art, it was said, had angered Pluto, robbing that deity of many a subject. Hippocrates had been the first to reduce medical science to anything like order, and to study with cautious care the proper treatment of diseases. He spoke of Galen; of the long period after him when medical science seemed to make no progress; spoke of the later eminent men, such as Servetus, Harvey, Warren and Mott, and declared that medical science did more for human happiness than all the other learned professions combined.

He spoke in condemnation of the class of pretenders and specialists, who claimed to have made new and wonderful discoveries of cures, naming Thessalus, Paracelsus, and, later, one Perkins, who had invented what he called metallic tractors, claiming for them great medical virtues, but which had proved to be worthless. He contrasted these with Hippocrates, who had taken upon himself an oath to study diligently the symptoms of patients, the proper remedies to be administered, and their whole medical treatment. He denied that regular physicians were stationary, as charged by some, but claimed that

they were in favor of all right progress; that they stood alone upon medical science and experience, and that their practice embraced the best of eclecticism. He said :

“Our belief and claim is that we stand on the only truly broad and charitable platform—a platform so catholic in its outreaching nature and sympathies, so pure in its purpose to gather from every source whatsoever, all that can be found to contribute to the cure of disease, the prevention of sickness or the prolongation of life, that none seeking the truth need to stray from it, which demands of none blind adherence to specified dogmas, which asks of those who affiliate with us only an intelligent knowledge of their profession, an honesty of purpose in its practice, the keeping in subordination all special dogmas, and the standing alone on professional knowledge and merit for patronage and preferment.”

The following are the closing passages of the address :

“To popularize medical knowledge is one of the pressing duties of the day. The field for legitimate medicine in this direction is broad, and too largely uncultivated, yet we rejoice that here and there the good work has been begun. The interests of humanity, the interests of scientific medicine, the thirst of the people for knowledge, all speak to us a lesson—that we give to the people in suitable language pure and healthful medical literature : thus we may save them from many a snare, and from many a destructive pitfall. If we believe our science to be true, let us so present it to the public mind, that its truthfulness will be appreciated, and its practice honored and trusted. If there is aught in it incapable of bearing the closest scrutiny, let that part of it fall, however venerable its usage or however largely supported by authority. Legitimate medicine claims for itself no exclusive privileges ; it seeks to conceal nothing, as it needs to conceal nothing ; it shrinks from no scrutiny, but ever courts an investigation of its principles and its practice, of its

science and its art. In all ages it has been 'the hope of the diseased throughout the world.' Chiefly through its instrumentality have its great hospitals, insane asylums and other charitable institutions of every kind been founded, and to-day it is the custodian of the chief of them throughout the world. So active has it ever been in these works of practical benevolence, breathing the spirit of the Divine Master, Himself the great Physician, that one has termed it Clinical Christianity, and another has spoken of it as Christ's Physical Gospel. Who can estimate its services to the world? Who can compute the value of the discovery of Jenner, which has robbed the world of the terror of one of its greatest pestilences? Who can put a price upon the relief from pain secured by chloroform? How will you estimate the value of life prolonged and sickness prevented? The health of the people is both the wealth and the safety of the nation, and in the preservation and prolongation of this are being achieved, and in the future are yet more to be achieved, some of the 'surest and most glorious triumphs' of medicine.

"Yet great as have been its achievements in the past, there opens up before us a boundless future. The 'Higher Success' of medicine is at once 'the dream' and the ambition of its votaries. The triumphs of medical science in the future are to be bounded only by the intellect and heart which God shall give to its followers, for partaking of the Godlike in its nature and mission, it may reach after the Infinite.

"Let us who are the custodians of its present honor see to it that it passes to the next generation untarnished, ever remembering, in the beautiful language of Dr. Willis, that the servant of religion hath no more of true sanctity about him than the good physician. The service indeed that was rendered of old in special temples to the Divinity, conceived in one of his most beautiful attributes, is not yet extinct upon earth, but has its ministering priest ennobled by Christianity in every worthy member of the

profession. Oh, let society cherish its medical community ; let it become aware that if science cannot aid in its struggles with disease, neither can ignorance ; that nothing can by possibility be known to the quacksalver and ignorant empiric that is not familiar to the educated physician ; that a youth of devotion to his art is too little to familiarize him with all the varieties of disease, and the means of meeting them successfully ; and that there is no access to the temple of medicine, save through the intimate knowledge of the laws by which we live and move and have our being."

The address was listened to with great attention, and at its close elicited hearty applause. On motion of Dr. Van Dusen, of Mineral Point, the thanks of the Society were unanimously tendered to Dr. Reeve, for his learned, able and interesting address.

Dr. Whiting, of Janesville, inquired of the Secretary if there was any business to present to the meeting ; if there was none, he moved to adjourn.

Dr. Marks, of Milwaukee, asked if there was not some unfinished business of the last meeting, which might be acted upon.

The Secretary replied that there was an amendment to the constitution, offered by Dr. Bartlett, last year, which it was proper to act upon. The amendment was to article 9, relating to membership of the Society, and requiring medical students to procure certificates of good moral character and attainments, of the State Board of Censors, and was to confer this power of granting certificates to the censors of county societies, which—after a lively debate, in which Drs. Van Dusen, of Mineral Point, Thomas, of Oshkosh, Whiting, of Janesville, Wight, of Milwaukee, Favill, of Madison, Ferrin, of Mentor, Mason, of Prairie du Chien,, Palmer, of Janesville, Dalton, of Mineral Point, Williams, of Cambridge, and M. M. Davis, of Baraboo, participated—was rejected, by a vote of 22 to 17.

Dr. Van Dusen moved that, as but one of the Board of

Censors, Dr. Mason, was present, Drs. Strong and Bartlett being absent, and there were likely to be candidates for admission to the Society, the President appoint two members to fill the vacancies, and the motion being carried, Drs. Van Dusen and M. M. Davis were so appointed.

The meeting then adjourned to 8 o'clock Wednesday morning.

WEDNESDAY, June 2.

The meeting was called to order by the President.

The reports of the Secretary and Treasurer, Dr. F. Nichols, of Milwaukee, of the proceedings of this year, were presented. The receipts of the year were reported to be \$566, mainly from membership dues, and the expenditures, of which \$220 were for printing transactions, were \$387. The reports were adopted, and the Treasurer's report was then referred to the Finance Committee.

Reports of interest to the members of the profession were read as follows :

By Dr. Ira J. Manly, of Markesan, from the Committee on Practice, embodying many interesting cases and suggestions therefrom in regard to treatment of fevers by water, as now practiced extensively in Europe and America. Also in the same paper were remarks on rheumatism and transfusion of blood. The report elicited remarks by Dr. Stoddard, as to whether arterial blood could not be safely infused by the immediate method, instead of venous as heretofore used.

Remarks were made by Dr. Whiting on the use of Peruvian bark in the treatment of rheumatism. Tincture of iron was recommended by Dr. Manly, and alkalies and diaphoretics by Dr. Stansbury. The report was referred to the Committee of Publication.

The report of the Censors recommended the following gentlemen for admission to membership : Dr. James Guinan, New London ; Dr. John A. Masterson, Waterloo ; Dr. Chas. S. Taylor, Janesville ; Dr. J. G. Meachem, Jr., Racine ; Dr. Chas. Egan, Highland ; Dr. N. H. Norris,

Beloit ; Dr. Joseph Van Buskirk, Ironton ; Dr. M. R. Gage, Sparta ; Dr. L. C. Cowles, Baraboo ; Dr. W. H. Vittum, Baraboo ; Dr. D. O. Bennett, Waterloo ; Dr. D. F. Boughton, Madison ; Dr. W. H. Gleason, Mazomanie ; Dr. J. J. Leavitt, Fennimore.

The report of the Committee on Surgery was a paper by Dr. Marks, on new methods of ligating arteries. It gave suggestions by Dr. Webber, of Cleveland, of pocketing the extremity of the artery as a substitute for ligation. Dr. M. recommended ligation by deer tendon, carbolized, as a method superior to ligations heretofore used. Discussion ensued on the subject by Drs. Stoddard, Palmer, and others. Dr. Day, of Wauwatosa, gave a case where Dr. Marks used tendonous ligature, and considered it superior to the silk. Dr. Stoddard questioned the reason for applying tendon instead of silk carbolized, both being animal tissues. The report was adopted and referred to the Committee on Publication.

Dr. Whiting moved that papers be referred to the Committee on Publication, after being read in regular order, which was objected to, and rejected by vote.

Some further remarks were made by Dr. Dalton on animal ligatures ; also, by President Reeve. Dr. Manly inquired what became of ligatures in the abdominal cavity, which was answered by Dr. Marks, recommending, as before, animal tendons, instead of silk, as being more easily absorbed. This statement was questioned by Drs. Stoddard, Whiting and Palmer. Dr. Palmer sees no superiority in tendon over silk, that also being, as was before stated, an animal substance, and consequently as capable of absorption.

Dr. Faville requested a change of the regular programme, that a committee might be appointed to investigate a case of alleged malpractice. Consented to. A committee of five was chosen by the chair, viz. : Marks, Whiting, Dalton, Mason and Manly—to report immediately.

Dr. Day reported a case of amputation by Dr. Marks,

with the use of carbolized deer tendon for ligature, with a very successful result. Had primary union in nearly its full extent, but was retarded somewhat by the necessity of using a silk ligature in one part.

It was voted that the invitation of Dr. McDill to visit the Insane Hospital be accepted.

The Committee on Pathology, Dr. Palmer, begged to be excused, as he had no report prepared—not having been notified. . . .

Dr. Senn read a paper on transplantation of bone, which was adopted and referred as usual.

The Committee on New Remedies presented a paper read by Dr. Armstrong, which elicited considerable discussion. The report was adopted.

A very interesting report of Dr. Wigginton, of the State Hospital for the Insane, on pathology of train diseases, and treatment, was read and referred to the Committee on Publication.

Dr. Palmer reported a case of unusual interest, of tubal pregnancy, and exhibited a post-mortem specimen, to illustrate this condition.

Remarks were made by Dr. McCall on a like case occurring in his practice.

From the Committee on Diseases of the Eye and Ear, Dr. Stoddard read a paper, which was referred to the Committee on Publication.

Adjourned till 1.30 P. M.

AFTERNOON SESSION.

The Society met at 2 P. M. and was called to order by the President.

Dr. Linde read a paper upon Diseases of the Skin, which elicited some discussion and was referred to the Committee on Publication.

Some little time was then occupied in making some arrangements for the banquet in the evening.

Dr. Griffin then read an essay upon small-pox and vaccination in reference to making it compulsory, taking strong ground in favor of such statute law.

The doctor gave statistics from which it would seem that the theory advocated by him should be adopted. After some remarks by members of the Society, the paper was referred to the Committee on Publication.

At about half past three the Society adjourned, and repaired to the North-Western depot where a special train was provided and waiting to take the party around the lake to the Wisconsin Hospital for the Insane. The party was under the escort of Dr. Wiggins, Assistant Physician at the Hospital, and was cordially received at the Asylum by Dr. McDill and his accomplished wife, and by Mrs. Halloday, the long-time faithful matron of the Institution. After looking through the Hospital, where everything was found in first class order, and partaking of choice refreshments generously served, the party returned to the city, and at nine, all assembled at the Park Hotel, where was provided by the Committee of Arrangements a grand banquet.

The large dining hall at the hotel was festooned with flags in a handsome manner and the long rows of tables were burthened with flags, flowers, cakes and delicacies of which no description can do justice.

THIRD DAY.

(From the Daily of June 4.)

The State Medical Society met again yesterday morning at 8 o'clock. Several committees were appointed, and a paper of Dr. Kempster was referred to the Committee on Publication.

Dr. H. P. Strong, of Beloit, made a report recommending the following names as suitable persons for officers for the ensuing year, who were elected :

President—Dr. J. B. Whiting, Janesville.

Vice-Presidents—Dr. Ira Manly, Waukesha, and Dr. F. Senn, Milwaukee.

Secretary and Treasurer—Dr. J. T. Reeve, Appleton.

The following were appointed as delegates to the American Medical Association: Drs. Manly, Waterhouse, Strong, Palmer, Butterfield, Fox, Dodson, Mason, Armstrong, Rogers, Stansbury, Bond, Griffin, Cory, Zeilley, Britt, Linde, Whiting, Smith, and J. Hobbins.

The following resolution expressing disapprobation of President Bascom's remarks on the subject of mixed medical schools in connection with the State University, was adopted:

Resolved, That the Society express its disapprobation of any action looking to any mixed medical schools in connection with the State University.

A vote of thanks was extended to President Reeve and Secretary Nichols, of the Society, for the prompt manner in which they had performed their duties; also to M. H. Irish, of the Park Hotel, for his courteous efforts to make them and their families feel at home, and for the banquet provided; also to the Press for the interest manifested in their meeting; also to Dr. McDill, of the Hospital for the Insane, for kindness shown them; also to Col. Knight, Superintendent of Public Property, for the use of his room.

The Society voted to hold its next meeting in Milwaukee, and the Committee of Arrangements were instructed to prepare a banquet.

Adjourned.

THE CASS COUNTY (IND.) MEDICAL SOCIETY.

The Society met in the room of Hall's Business College, in Logansport, June 30, 1875. The President, Dr. A. Coleman, in the chair.

After the usual routine business, the clinic was opened by Dr. W. H. Bell, presenting a case of softening of the tibia, which was prescribed for.

Dr. Adrain introduced a case of ulcerated cornea, which was examined and discussed briefly by several of the members.

Another case was presented by Dr. Adrain, who asked the society to examine and give him the etiology, pathology and therapeutics of it.

Dr. Fitch said it belonged to a class of cases which he recognized as an "Anomalous disease of the Tongue," in a letter to the *North-Western Medical Journal*, in 1838. It was epidemic then, and cases had been seen occasionally since that time.

Dr. Coleman said he had treated the case before the Society, and he recognized it as belonging to the class of cases spoken of by Dr. Fitch, and the same that he had described in a short paper read before the Society the past year. It commences with a stinging or burning pain in the tongue, the tip and edges are red and may become fissured, the saliva is hot and scalding, the papilla and epithelium slip off, and the tongue is left smooth. The patient may be able to work, and possess a good appetite, but only the mildest food can be taken. It may change to the soles of the feet, with like symptoms there. The treatment is not satisfactory, though tonics had done good, and creasote, he thought, beneficial. The patients improved slowly, but generally recovered in the summer season.

Dr. Adrain thought it belonged to the dartrous diathesis, that a skin disease generally preceded it, and that alteratives would act well.

Dr. Adrain then read a paper on cerebro-spinal meningitis, which was discussed by Drs. Bell, Fitch, Coleman, Adrain, and Faber.

The third annual election of officers was then held, and resulted in the selection of—

Dr. Graham N. Fitch, President.

R. Faber, Vice-President.

I. B. Washburne, Secretary.

J. M. Justice, Treasurer.

J. A. Adrain, Wm. H. Bell, and J. Z. Powell, Censors.

The Society then adjourned to meet Wednesday, Oct. 6th, 1875.

I. B. WASHBURNE, M.D., Sec.

[From the New York Medical Journal.]

THE AMERICAN NEUROLOGICAL ASSOCIATION.

The first session of this Association was held in this city, June 3rd, 4th, and 5th, Dr. J. S. Jewell, of Chicago, occupying the chair. The following members were present: Drs. J. S. Jewell, Walter Hay, and H. M. Bannister, of Chicago; Dr. R. Bartholow, of Cincinnati; Dr. J. K. Bauduy, of St. Louis; Dr. M. Burnett, of Knoxville; Dr. E. R. Hun, Jr., of Albany; Drs. E. H. Clarke, R. T. Edes, J. J. Putnam, S. G. Webber, and F. D. Lincoln, of Boston; Drs. S. Weir Mitchell, William Pepper, and H. C. Wood, Jr., of Philadelphia; Drs. J. Van Bibber, and F. T. Miles, of Baltimore; Dr. H. D. Schmidt, of New Orleans; Dr. F. D. Lente, of Cold Spring, N. Y.; Dr. J. C. Shaw, of Brooklyn; Drs. W. A. Hammond, Meredith Clymer, E. C. Seguin, T. M. B. Cross, J. J. Mason, F. K. Kinnicutt, A. D. Rockwell, D. B. St. John Roosa, A. McLane Hamilton, E. G. Loring, J. C. Dalton, J. W. S. Arnold, N. B. Emerson, T. A. McBride, and J. S. Lombard, of New York.

On motion of Dr. McBride, the following resolution was adopted:

"It being the sense of this Association that its proceedings should be reserved for the profession and the medical press, be it

Resolved, That reporters from non-medical journals be excluded from the meetings of the Association; and that any information requested by the press be furnished by the Secretary, under the guidance of the officers of the Association."

The Committee on Organization, through Dr. Meredith Clymer, reported the subjoined Constitution and By-Laws, which were adopted:

CONSTITUTION.

I. This Association shall be named and known as "The American Neurological Association."

II. It is established to promote the study of neurological science in all its departments.

III. There shall be two sorts of members, namely, active members—not exceeding at any one time fifty in number, and who shall be at the time of their election residents of the United States—and foreign associate members, not exceeding at any one time twenty-five in number, and who shall be non-residents. Active and foreign associate members shall be elected by ballot on the recom-

mentation of the Council, on one day's previous notice of such ballot, by a majority of all the members present :

Provided, That no one shall be eligible for active membership unless he has previously submitted a paper on some subject connected with neurological science, which paper shall be referred to the Council for examination and report. Active members only shall be entitled to vote at any meeting, or be eligible to any office.

IV. The officers of the Association shall be a President, two Vice-Presidents, a Corresponding Secretary, a Recording Secretary, who shall perform the duties of Treasurer, and a Curator. They shall be nominated by a Committee of Nomination of five members, appointed by the President on the first day of the annual session, and who shall report on the day following, immediately after which the election shall take place. The election shall be by ballot, and the person who shall have the greatest number of votes shall be declared elected to the office for which he may be a candidate.

In case of a vacancy occurring in any office between the dates of the annual election, it shall be filled by the Council until the next annual election.

The officers shall enter upon their duties immediately after the organization of the annual session next after their election, and shall hold office for one year :

Provided, That the officers of the first session shall be elected immediately after the organization of the Association, and shall hold their offices until the election at the second annual session.

V. The Council shall consist of the officers of the Association, shall manage the affairs of the Association, subject to the Constitution and By-Laws, and shall report to the Association at large at each annual session.

VI. The annual session of the Association shall be held on the first Monday in June, in each year, and at such place as shall be designated by the Association at the previous annual session, and shall continue for three days, unless the time be extended by a vote of the Association.

VII. This Constitution may be amended by a two-thirds vote of all the members present, at any annual session, provided that notice of said proposed amendment in writing be given at the annual session immediately preceding.

BY-LAWS.

1. Each and every member of the Association shall pay annually to the Recording Secretary the sum of five dollars.

No member who shall be in arrears for one year shall be entitled to vote, or be eligible to any office in the Association.

2. The officers of the Association shall discharge the duties belonging to their respective offices. The President shall be *ex-officio* chairman of the Council.

3. The Council shall meet as often as the business of the Association may require. They shall keep a record of their proceedings, which shall be read at the annual session of the Association. They shall not have power to make the Association liable for any debts exceeding in total the sum of one hundred dollars in the course of any one year, unless specially authorized to do so by a recorded vote of the Association.

4. The order of business at each meeting of the Association shall be as follows :

5. The titles of all papers to be read at any annual session shall be forwarded to the Corresponding Secretary not later than one month before the first day of the session. All papers that may be read before the Association and accepted shall become the property of the Association, and their publication shall be under the control of the Council. All publications of the meetings of the Association shall be under the direction of the Council.

6. These By-Laws, or any one or more of them, may be amended, or repealed, or suspended, by a two-thirds vote of all the members present at any meeting during an annual session, provided notice in writing of any proposed amendment or repeal has been given at the meeting immediately preceding the one at which the motion is made and the vote taken.

The following report of the nominating committee was unanimously adopted :

For President—Dr. S. Weir Mitchell, of Philadelphia.

For Vice-Presidents—Dr. J. S. Jewell, of Chicago ;
Dr. E. H. Clarke, of Boston.

For Corresponding Secretary—Dr. J. J. Mason, of New York.

For Curator—Dr. J. W. S. Arnold, of New York.

For Recording Secretary and Treasurer—Dr. E. C. Seguin, of New York.

A communication was subsequently received from Dr. S. Weir Mitchell, containing his resignation of the presidency, and Dr. Jewell was elected President in his place, Dr. E. H. Clarke being made first Vice-President, and Dr. F. D. Miles, second Vice-President.

A paper on the study of myelitis, by Dr. Webber, of Boston, was read and discussed.

Dr. Miles reported a case of spinal paralysis, with partial recovery.

Dr. Hammond presented a case of athetosis.

Dr. Van Bibber read a paper on the treatment of paralyzed muscles by elastic relaxation.

Dr. Putnam reported an interesting case of injury of the brachial plexus.

Dr. Van Bibber reported also a case of coincident nerve-injury and cutaneous eruption, which called forth remarks on similar cases by several gentlemen.

Dr. Rockwell read a paper on electro-medicine with reference to its physiological and therapeutical relations to the nervous system.

Dr. Putnam read a paper on a case of circumscribed analgesia of the skin after typhoid fever.

Dr. Hamilton exhibited a new and ingenious dynamometer, consisting essentially of a rubber ball, and a glass tube to show and register the degree of pressure exerted on the ball.

Dr. Hun presented a specimen of fracture of the odontoid process.

Dr. Lente read a paper on neuralgia and other neuroses arising from cicatrices in the scalp.

Dr. Hammond presented a paper on pigmentary deposits on the brain as the result of malarial poisoning.

Dr. Hay offered a specimen of hemiplegia, with clot on the same side.

Dr. Hammond nominated for membership Drs. S. Oakley Vanderpoel, T. Edwards Clark, and Clinton Wagner, of New York.

Dr. Mason nominated Drs. J. P. Gray, of Utica, and D. H. Kitchen, of New York.

Dr. E. C. Seguin nominated Dr. G. M. Beard, of New York.

Dr. Hammond offered the following :

Resolved, That, as the number of active members of this Association is limited to fifty, it is inexpedient to elect to membership superintendents of lunatic asylums, but that in this action the Association does not wish to depreciate the labors of these

gentlemen, and is further influenced in this action by the fact that there is already an association composed exclusively of superintendents of such asylums.

After discussion, the matter was referred to the Council, with instructions to report at the next session of the Association.

Drs. Clymer, Hammond, and Hamilton, were appointed a Committee of Arrangements to act in conjunction with the Council for the session of next year. It was decided to hold the next session of the Association in this city, on the first Wednesday in June, 1876.

Selections.

ON THE USE OF WARM AND HOT WATER IN SURGERY.

By FRANK H. HAMILTON,

SURGEON TO BELLEVUE HOSPITAL, NEW YORK.

GENTLEMEN: It is many years since I had an opportunity of addressing you as members of this Society. In the meantime experience has brought to me many new and interesting observations. From these I have selected that one, as the theme of a few remarks, in which my interest has been the most recent, and, perhaps, I might justly say, the most profound, namely, the use of *Warm and Hot Water in Surgery*.

In 1851, Amussat, of Paris, sent me a copy of his monograph on the "Use of Water in Surgery," which I translated and published in the *Buffalo Medical Journal*. In this brochure the conclusion was reached that, as a rule, that temperature was most useful which was found on trial to be the most agreeable; and that, in most cases, this would be a temperature of about 68°, Fahrenheit; that is to say, water at a temperature considerably below the natural temperature of the body, but not cold water. During most of my life I have been guided by the experience of Amussat, and have employed water, as an external application in surgery, at a temperature which might be called tepid or cool. Two years

ago I was made consulting and operating surgeon to the St. Francis Hospital, in New York City—a hospital of two hundred and fifty or three hundred beds—and found the gentlemen in that institution, all thoroughly educated German physicians, using warm and hot water in nearly all cases of surgical accidents. Dr. Achilles Rose, who had the principal care of the surgical accidents, was more especially interested in the subject, and first called my attention to it. The practice was new to me, and had been imported, I was informed, from the practice of certain German surgeons. I watched with care the results, and I soon became convinced that here was a means of controlling inflammation, and of preventing the numerous accidents incident to traumatic inflammation, of most wonderful efficacy.

To be brief, during two years or more of service in that hospital, I have never seen a case of gangrene extending beyond the parts originally injured, nor of erysipelas originating during the treatment, nor of pyæmia or septicæmia. I have also employed the same method for two years, when, as surgeon-in-chief, I was in charge of the Reception Hospitals, and the same practice is now employed in the wards under my care at the Bellevue Hospital. My experience, therefore, includes the management and observation of probably more than one hundred cases, with either hot or warm water, and all has tended to confirm my early convictions of the value of this plan. It cannot be denied that both cool and cold water are sometimes effective in preventing, or in arresting, the progress of inflammation; but it is plain to me that warm and hot water do this more certainly, and without the danger of those terrible accidents, such as gangrene, caused by the depression of the temperature and consequent devitalization of the parts.

There are two modes of using the water: one by submersion in a bath, and the other by fomentation. Of these the bath is the best; but it can only be employed in cases of injuries of the hand and forearm, or of the foot and leg. Those which we employ are manufactured by Otto and Rynders, and are made of zinc, and are furnished with stop-cocks for the purpose of renewing the water at pleasure. The temperature employed for ordinary injuries is from 95° to 100°, Fahrenheit, but in cases of gangrene we elevate the temperature to 105° or 110° sometimes. Slight variations in temperature do not affect the results, and in most cases it is found sufficient

to change the water three times daily. It will be understood that neither sutures, adhesive plasters or rollers are employed. Union by "first intention" is not therefore expected by this method. If we desire primary union we must employ fomentations, not submersion; nor even then shall we avoid secondary accidents so certainly as when we omit sutures and bandages.

When a limb is submerged it soon becomes œdematous, partly in consequence of the depending position and partly in consequence of endosmosis; and this œdema is so great often as to cause apprehension in the minds of those inexperienced in its use; but it will be found almost always that there is no tenderness on pressure, and if the limb is removed from the bath at the end of twelve or fourteen days the œdema will soon disappear. Let me not omit to say, that in order to avoid all danger of a hæmorrhage, we rarely submerge a limb until twelve or twenty hours after the accident.

Fomentations are employed after the lapse of twelve or fourteen days in nearly all cases, and occasionally at night when the patient is weary of the bath; and in other cases in which we cannot use the bath, fomentations are employed from the beginning.

If *fomentations* are employed, the parts must be kept *thoroughly saturated* with water. Merely moistening the surface will not accomplish the results desired. Three or four sheets of lint should be soaked in the water and wrapped about the injured parts, and over this a large mass of cotton batting should be placed, the whole being enclosed in soft vulcanized rubber or oil silk. This may require to be renewed three or four times daily.

Permit me to relate one or two cases by way of illustration. A man was brought to the Park Reception Hospital whose foot had been traversed by the wheel of a car, crushing the bones and the flesh below the tarsus. Every one knows how certainly such an accident proves fatal if we do not amputate the foot, and we can seldom amputate below the ankle joint. This limb was immediately placed in a bath at a temperature of about 95° or 100° Fahrenheit. During the following six or seven days he suffered very little pain; there was no traumatic fever, nor did the gangrene extend a line beyond the parts originally injured. About this time, at one of my visits, I discovered that gangrene had commenced above the seat of the injury, and had within a period of

twenty-four hours, extended about one inch. It was now ascertained that the temperature of the bath had become very much lowered, so that to my hand it felt cool. The orderly had omitted to renew the water. At once the cool water was withdrawn, and water at a temperature of 105° Fahrenheit substituted. On the following morning the gangrene was arrested, and from this time the wound continued to do well, and a recovery eventually took place, with only the loss of the extremity of his foot.

A man was brought to the 99th Street Reception Hospital with a compound fracture of the tibia and fibula, the fracture being a little below the middle of the leg. The house surgeon attempted to save the limb, but gangrene ensued, and on the third day I was summoned. The gangrene had now reached the middle of the leg, and was extending rapidly upwards, while an erysipelatous inflammation reached above the knee. His pulse was rapid and his general condition very bad. It is scarcely necessary to say, that under these circumstances amputation would probably have hastened a fatal termination. As soon as the bath could be made ready, the limb was submerged in water at a temperature of about 105° Fahrenheit. The following day his general condition had much improved, and on the ninth day, I think it was, the limb was spontaneously separated at the point of fracture. From the hour that the limb was submerged the erysipelas began to decline, and the gangrene was arrested.

I cannot venture to occupy your time with any more extended remarks, as there is so much unfinished business pressing on the Society, but may refer you to the *Richmond and Louisville Medical Journal* (published at Louisville, Ky.) for January, 1874, in which I have given a more full account of the mode of procedure in these cases; also to the *New York Medical Record*, of May 15, 1874, containing a supplement to these observations.

EDITOR'S NOTE.—The above article is reprinted from a small pamphlet just issued by G. P. Putnam's Sons, New York, in order to direct attention to a subject which so well deserves it. The testimony of an expert, like Dr. Hamilton, equally distinguished for his honesty and prudence, as for his sagacity and skill, does not need

the ample corroboration supplied in his admirably conducted wards at Bellevue Hospital, where the good results of the practical application of his conclusions are apparent.

The value of this agent in surgical practice, has moreover been thoroughly demonstrated by Prof. Moses Gunn, of Rush Medical College, both in his surgical clinic, and in his wards at St. Joseph's Hospital, and has received his cordial approval. So well is the professor's predilection for getting his patients into actual hot water understood by the students, that they have learned to expect metaphorical hot water for themselves if they neglect it.

H.

Editors' Book Table.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

ANNUAL ADDRESS before the Society of the Alumni of the Medical Department of the University of Pennsylvania.
By *Cornelius G. Comegys, M.D.*, Lecturer on Clinical Medicine in the Cincinnati Hospital, Ohio, etc., etc.

The above address is worthy of notice inasmuch as it is above the average of similar productions, and moreover presents some noteworthy propositions. Commencing with an eloquent tribute to the old Professors of the Faculty of Medicine of the University, both living and dead, the author proceeds to the consideration of "the position and responsibility of medical men." Under this head, he urges upon medical men the necessity of devoting more time and attention to the subject of "State Medicine," *i. e.*, public hygiene, and to a more active "participation in legislation," with the end to direct and control it in this relation. Not only does

he advocate the exercise of the influence of the profession in the political arena, to the end that their knowledge might be utilized for the protection of public health, but likewise for the more judicious selection of men for positions of public trust and responsibility, who should be, by reason of more perfect mental and moral organization, better fitted for the discharge of important trusts, requiring both intelligence and integrity for their satisfactory fulfillment.

The author's opinions of the relations of mind and matter, are embodied in the expression—“This supreme mental force—will—is no transcendental entity to be considered apart from physical existence, but may be said, in its fullness, to be the correlative of the totality of the organic power of the brain.” Hence, he urges the necessity for the exercise of educated judgment in the selection of leaders. His defense of the profession against the charges of superficiality and uncertainty of knowledge is able and just, and his advocacy of the claims of medicine upon private and public benevolence, well founded and forcible. He asserts truthfully, that “the resources of medical education have been derived from the profession itself.” “Millions of dollars have been given to other colleges, but no one has constructed a medical edifice, or so endowed a medical school that its teachers should not be dependent on students' fees. Nevertheless, under all the embarrassing circumstances, our faculties have provided buildings, accumulated museums, libraries, and apparatus, at a vast expense, and have moreover assumed the gratuitous care of all the sick poor of hospitals and dispensaries. It is an unparalleled spectacle, and nowhere seen in the world but in the United States of America.” The author presents his views upon the momentous question of medical education, which are worthy of study. Indeed, the whole address is evidently the production of a profound student, a liberal thinker, and an accomplished physician. H.

CERTAIN NERVOUS AFFECTIONS OF THE THROAT. By *Clinton Wagner, M.D.*, Physician to the Metropolitan Throat Hospital; late Clinical Assistant, Hospital for Diseases of the Throat. London, etc., etc.

An interesting abstract, read before the New York Neurological Society, of some of the work of the Metropolitan Throat Hospital, organized Jan. 3, 1874, under the special charge of Drs. Clinton Wagner and J. Morris Asch, both late of the U. S. Army, with an efficient staff of consulting surgeons and clinical assistants.

This institution is the first systematized effort to specialize the study of laryngology, in the United States, and thus far, as exhibited in the pamphlet before us, has been eminently successful. H.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY, including Localized and General Faradization; Localized and Central Galvanization; Electrolysis and Galvano-Cautery. By *Geo. M. Beard, A.M., M.D.*, Member of the New York Society of Neurology and Electrology, etc., and *A. D. Rockwell, A.M., M.D.*, Member of the New York Society of Neurology and Electrology, etc., etc.

The work of Drs. Beard and Rockwell became so widely and favorably known in its first edition, that but little is left to be said of this, the second, further than that it bears the impress of careful revision of the former, and presents moreover some valuable additional matter, especially in the department of electro-physics, and in that of electro-physiology and clinical electro-medicine likewise.

The authors' remarks on the necessity resting upon every one pretending to the use of electro-therapeutics to become first an electrologist, are worthy of careful attention. It is certain that had the therapeutic application of this force been restricted to "masters of electricity in its physical and physiological" relations, the range of its applicability would have been much more clearly defined, and its results more satisfactory.

The work is one of the most complete summaries of the whole science of electrology extant, and should be carefully studied by every one desiring to become expert therein.

The mechanical and typographical excellence of the book is assured by the imprimatur of William Wood & Co., New York. 1875. H.

A PRACTICAL TREATISE ON ECZEMA, including its Lichenous and Impetiginous Forms. By *Dr. McCall Anderson*, Professor of Clinical Medicine in the University of Glasgow; Physician to the Royal Infirmary, to the Dispensary for Skin Diseases, and to the Cutaneous Wards of the Western Infirmary, etc., Glasgow. Third Edition, with Illustrations. Philadelphia: Lindsay & Blakiston. 1875.

One of the most satisfactory books which has issued from the press during the current year, which no one, we think, can read without deriving both pleasure and profit therefrom. And no one, who has had even a few cases of the troublesome and obstinate malady in his care, will feel that the time spent in the study of this work has been lost.

The author's definition of eczema is clear and concise, and his description graphic. The etiology, pathology and therapeusis of the disease as it has occurred under his observation, are elaborated with much care and with a detail which, while circumstantial is never tedious. He has, moreover, collated his own observations, for making which, his opportunities have been singularly ample, with those of contemporary writers, thus presenting a copious array of corroborative testimony. His remarks upon the neurotic origin of eczema might have been elaborated a little more fully with advantage, for while he refers to it as a "transferred neurosis," with illustrated cases, he nowhere indicates its existence—which is of frequent occurrence—as a reflex neurosis from remote peripheral irritation.

The mechanical execution, including paper, presswork and type, is really beautiful—the arrangement of mar-

ginal titles greatly facilitating study. We should be glad to recognize in this the beginning of another permanent improvement in the art of medical book making, which has in the hands of our more prominent publishers already made such rapid advances. H.

ORTHOPÆDIA, OR A PRACTICAL TREATISE ON THE ABERRATIONS OF THE HUMAN FORM. By *James Knight, M.D.*, Member of the Medico-Chirurgical Faculty of Maryland, the District Medical Society of Ohio, and the County Medical Society of New York; Physician and Surgeon in Charge of the Hospital of the New York Society for the Relief of the Ruptured and Crippled, etc., etc. New York: G. P. Putnam's Sons. 1874.

The practical results of thirty years of private and ten of hospital practice, in the special department of orthopædic surgery. The author has undoubtedly enjoyed immense advantages in accomplishing himself in his specialty, and appears to have utilized them fully, not only by observation, but by study of the literature of his subject, which he seems to have mastered from the earliest to its most recent contributions.

The book comprehends a very wide range of topics within the specialty, all of which are carefully considered. Some of the more remarkable cases detailed are illustrated by wood cuts, as are likewise the various forms of apparatus recommended. The work is thoroughly practical, and cannot fail to prove very useful. H.

ON THE TREATMENT OF PLEURISY: With an Appendix of Cases, showing the value of Croton Oil, Ether, and Iodine, as Counter-irritants in other Diseases. By *John W. Corson, M.D.*, Late Physician to the Class of "Diseases of the Chest and Throat," in the New York and Eastern Dispensaries, etc., etc. New York: Wm. Wood & Co. 1874.

A pleasantly written narrative of the advantages to be derived from the use of mild measures generally, and especially of external remedies in the treatment of chest affections, as practically demonstrated in the large field of observation afforded in the New York Dispensary.

The little lecture of thirty pages will well repay the time spent in reading it.

H.

A MANUAL OF DIET IN HEALTH AND DISEASE. By *Thomas King Chambers, M.D., Oxon., F.R.C.P.*, London, Honorary Physician to H. R. H. the Prince of Wales; Consulting Physician to St. Mary's and the Lock Hospitals; Lecturer on Medicine at St. Mary's School; Corresponding Fellow of the Academy of Medicine. New York, etc., etc. Philadelphia: Henry C. Lea. 1875.

To those familiar with the writings of Dr. Chambers, his claim to share with Sir Thomas Watson the title of Xenophon of Medical Literature, will be readily conceded, for it is certain that he has few equals and no superior, as a master of elegant English, within the ranks of professional writers. His well-earned reputation in this regard will suffer no diminution from the work before us.

The subject matter is arranged under three subdivisions, the first of which comprehends General Dietetics; the second, Special Dietetics of Health; and the third, Dietetics of Sickness. In the first is demonstrated, not only the essential constitution of a dietary system best adapted for the necessities of mankind in health, under varying conditions of existence, but likewise the great superiority, not only from a dietetic, but from an economic point of view, of a mixed diet, and one also which shall vary widely in its constituent elements, with the varying occupations and epochs of man's life. The second chapter, upon the choice of food, is not only instructive, but practically so, containing rules for the selection of the best meats, and their greater economic value. The sanitary relations of diseased meats and of animal parasites is condensed into a few comprehensive pages, so clearly and explicitly as to be intelligible to all. Dr. Chambers is an Englishman, writing in the smoky atmosphere of London, and hence we can account for his very feeble commendation of fruits as food. Had his lot been cast in sunnier lands where nature provides a more bountiful repast for her children, and where fruits constitute so

large—sometimes the principal—portion of the food of all classes, his commendation would have been more liberal, his praise less stinted.

From the admirably written chapter upon wines as dietetics, it is easy to perceive that our author is no “crusader,” for none of that illustrious army could write so *tastefully* of the delicious juice of the grape. What could be more refreshing on a day like this, with the mercury up in the nineties, than to hear from the lips of a wise physician like Dr. Chambers, that “as a regular beverage for a healthy person there is no wine in the English market equal to claret”? In this era of temperance run mad, this author is to be thanked by every honest lover of temperate festivity for these words: “But I am quite sure that the not infrequent manufacture of occasions for domestic rejoicing, a birthday, a wedding anniversary, a harvest home, a horse sold, the planting of a tree, the calving of a cow, a daughter presented at court, or cutting her first tooth, or any other good stroke of business, is a great promoter, not only of love and happiness, but of personal health. Let the beverages which celebrate the occasion be chosen for their peculiar and exceptional flavors. If they are good of their class, the moderate use will not shorten, but both cheer and lengthen life.” But the author is, nevertheless, as unsparing in condemning the use of alcohol, as the most ardent temperance reformer could desire. Not satisfied with the researches of others, he has instituted a series of experiments himself, for the purpose of determining the true place of alcohol in dietetic economy, and has furnished the results of these experiments in tabulated form.

It would be well if the opinions expressed in the chapters upon Infant Diet, could be deeply impressed upon the minds of the rising generation of medical men—the rest are unimpressible—that the annual holocaust of infant life, offered upon the shrine of physiological ignorance, might be spared; if they could be convinced, with Dr. Chambers, that “Laputa never devised anything

more preposterous" than "Liebig's food for infants," and that "it is only when the coming teeth are on their road to the front that the parotid glands secrete sufficient saliva to digest farinaceous food."

It is scarcely possible, within the limits of a brief review such as this, to do full justice to this scientific, practical, and scholarly little work. The simply practical man will find in it safe and simple rules for his guidance; the scientific man will find the demonstration of the principles upon which these rules are based; and the scholar will be able to gratify his literary and æsthetic taste in the elegant style in which they are presented. The book deserves to be read by all. H.

BOOKS RECEIVED.

TRANSACTIONS OF THE NEW YORK ODONTOLOGICAL SOCIETY—
Special meeting, Dec. 14, 15, 16, 1874.

PAMPHLETS RECEIVED.

ANNUAL ADDRESS before the Society of the Alumni of the Medical Department of the University of Pennsylvania. By *Cornelius G. Comegys, M.D.*, Lecturer on Clinical Medicine in the Cincinnati Hospital, Ohio; Late Professor of the Institutes of Medicine and Clinical Medicine in the Medical College of Ohio. With the Proceedings of the Alumni Meeting of 1875.

INJECTIONS OF TINCTURE OF IODINE into the Cavity of the Uterus in Hæmorrhage, and after Delivery. By *James Trask, M.D.*, late Prof. of Obstetrics in the Long Island College Hospital. New York: William Wood & Co. 1875.

TRANSACTIONS of the Ninth Annual Meeting of the Medical Association of the State of Missouri, April 20th and 21st, 1875.

THE ALBANY MEDICAL COLLEGE—The Medical Department of Union University, Annual Catalogue and Announcement. 45th Session. 1875.

A CLINICAL CONTRIBUTION TO THE TREATMENT OF TUBAL PREGNANCY. By *T. Gaillard Thomas, M.D.* New York: D. Appleton & Co. 1875.

SYNOPSIS—TREATMENT OF UTERINE DISPLACEMENTS. By *Prof. Henry F. Campbell*, of Augusta, Georgia.

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ON THE USE OF HOT WATER IN SURGERY. By *Frank H. Hamilton*, Surgeon to Bellevue Hospital, New York. G. P. Putnam's Sons. 1875.

THE METROPOLITAN THROAT HOSPITAL, REPORT OF. *Clinton Wagner, M.D.*, Medical Supt.

THE PHYSIOLOGICAL ACTION OF THEBAINE. By *J. Ott, M.D.*, of Easton, Pa.

THE PHYSICAL PROPERTIES OF DENTAL AMALGAMS. By the late *Thomas Hitchcock, M.D., D.M.D.*

ON SPASMODIC URETHRAL STRICTURE. By *F. N. Otis, M.D.*, Clinical Professor of Genito-Urinary Diseases at the College of Physicians and Surgeons, New York. Reprinted from the Archives of Dermatology, Vol. I, No. 3. 1875.

CLINICAL STUDIES WITH THE NON-NAUSEATING USE OF IPECACUANHA, Chiefly in Intermittents. Reprinted from *Atlanta Medical and Surgical Journal*. 1875.

RELATIONS OF OPHTHALMOLOGY TO PRACTICAL MEDICINE. An Introductory to the Summer Course of Lectures of the Jefferson Medical College, Delivered March 29, 1875, by *William Thompson, M.D.*, Lecturer on Ophthalmic and Aural Surgery.

PATHOLOGY AND ETIOLOGY OF PULMONARY PHTHISIS, in relation to its Prevention and Early Arrest. By *E. Darwin Hudson, Jr., A.B., M.D.* New York: D. Appleton & Co. 1875.

CERTAIN NERVOUS AFFECTIONS OF THE THROAT. By *Clinton Wagner, M.D.*, Physician to the Metropolitan Throat Hospital; late Clinical Assistant, Hospital for Diseases of the Throat, London; Member of the N. Y. Laryngological Society; of the N. Y. County Medical Society; of the N. Y. Neurological Society, etc., etc. Read before the N. Y. Neurological Society, Sept. 7, 1874. Reprinted from the Psychological and Medico-Legal Journal for October, 1874. New York: F. Christern & Co., 77 University Place.

NOTES ON THE DIAGNOSIS OF BLOOD STAINS. By *Joseph G. Richardson, M.D.*, Microscopist to the Pennsylvania Hospital.

IRIDOTOMY, and its Applicability to Certain Defects of the Eye. By *W. B. Calhoun, M.D.*, Professor of Diseases of the Eye and Ear in the Atlanta Medical College. 1875.

THE DOCTRINE OF THE CORRELATION AND CONSERVATION OF FORCES, and its Bearing upon Theism. By *G. M. Duzan, M.D.*, Zionsville, Indiana. Reprinted from the *Indiana Journal of Medicine*.

THE EXTENSION WINDLASS, presented to the American Medical Association, May, 1875. By *Charles Dennison, M.D.*, Denver, Colorado. Reprinted from the *N. Y. Medical Journal*, May, 1875. New York: D. Appleton & Co.

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JOURNALS RECEIVED.

The Atlanta Medical and Surgical Journal—Vol. xiii, Nos. 3, 4.
The American Medical Weekly—Vol. ii, Nos. 21, 23, 24, 25, 26, and Vol. iii, Nos. 1, 2.

The American Practitioner—Vol. xl, Nos. 66, 67.

L'Anatomie et de la Physiologie Journal de. Ch. Robin—No. 3, Mai et Juin, Paris, 1875.

The American Journal of the Medical Sciences—No. cxxxix, July, 1875.

The Buffalo Medical and Surgical Journal—Vol. xiv, Nos. 9, 10.

The Boston Journal of Chemistry—Vol. ix, No. 12, Vol. x, No. 1.

The Canada Medical and Surgical Journal—Vol. iii, No. 12, Vol. iv, No. 1.

The Clinic—Vol. viii, Nos. 22, 23, 24, 25, 26, Vol. ix, Nos. 1, 2.

The Cincinnati Lancet and Observer—Vol. xviii, Nos. 6, 7.

The Detroit Review of Medicine and Pharmacy—Vol. x, No. 6.

The Dental Cosmos—Vol. xvii, Nos. 6, 7.

The Druggists' Circular, Vol. xix, No. 7.

The Eclectic Medical Journal—Vol. xxxv, No. 7.

The Indiana Journal of Medicine—Vol. vi, Nos. 2, 3.

The Kansas City Medical Journal—Vol. v, No. 3.

The London Lancet, June, 1875.

The Laboratory, Boston—Vol. i, No. 2.

The Medical News and Library—Vol. xxxiii, Nos. 389, 391.

The Monthly Abstract of Medical Sciences—Vol. ii, Nos. 5, 6, 7.

The Medical Record, New York—Vol. x, Nos. 22, 23, 24, 25, 26, 27, 28.

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- The Medical Times, Philad.—Vol. v, Nos. 187, 188, 189, 190, 191, 192, 193.
The Melbourne Medical Record—Vol. iv, Nos. 7, 8, 9, 10.
The Medical Herald—Vol. viii, No. 2.
The Medical Examiner, Chicago—Vol. xvi, Nos. 11, 12, 13.
The Medical Press and Circular, London—Vol. xviii, No. 1896.
The Medical Times and Gazette, May 29, 1875.
The Medical Register and Advertiser—Vol. i, No. 2.
The Nashville Journal of Medicine and Surgery—Vol. xxxvi, No. 6, Vol. xxxvii, No. 1.
The New York Medical Journal—Vol. xxi, No. 6, Vol. xxii, No. 1.
The New Orleans Medical and Surgical Journal—Vol. iii, No. 1.
The Pharmacist—Vol. viii, No. 7.
The Pacific Medical and Surgical Journal—Vol. xviii, Nos. 1, 2.
The Practitioner, London—Nos. lxxxiii and lxxxiv.
The Printer Artisan—Vol. iii, No. 1.
Le Progres Medicale, Paris, 3c Annee—Nos. 16, 17, 18, 19, 20.
The Public Health Magazine, Montreal—Vol i, No. 1.
The Richmond and Louisville Medical and Surgical Journal—Vol xix, Nos. 5, 6.
The St. Louis Medical and Surgical Journal—Vol. xii, Nos. 6, 7.
The Southern Medical Record—Vol. v, No. 4.
The St. Louis Medical Record—Vol. ii, No. 3.
The Sanitary Journal—Vol. 1, No. 7.
The St. Louis Clinical Record—Vol. ii, No. 4.
The Technologist—Vol. vi, No. 6.
The Texas Medical Journal—Vol iii, No. 2.
The Virginia Medical Monthly—Vol. ii, Nos. 3, 4.

Medical Items, News and Gossip.

(BY L'ANGLOIS EDITEUR.)

It is reported that Dr. Fordyce Barker "produced a profound impression" on the medical mind of London, by a lecture before a learned body in that city, on the treatment of puerperal fever. Whether favorable or unfavorable, the reporter sayeth not. Dr. Barker assumed the "Alonzo Clark doctrine:" that puerperal fever, being essentially of traumatic origin, and its phenomena due to communication to the nervous system of irritation, therefore its remedy is to be sought in opiates to keep the nervous system quiescent until the local injury is remedied by ordinary physiological processes. It is assumed that this treatment has been practiced generally in New York for the last fifteen or twenty years, and therefore excites no surprise in the American mind, although sufficiently disturbant to the Anglican sentiment. The somewhat dubitant Chicagoan marvels not at the "profound impression" of the Anglican mind under the circumstances. — Transfusion begins to be understood. The late lamented Gen. Blair was temporarily benefited. What more could have been expected? The transfused blood is only an advance on digestible food. In the capillaries even the blood is still *outside* the *living* body. The blood is nothing but nutrient material, ready to be appropriated for nutrition. The "life is in the blood" just as the life of man is in beefsteak, cabbage, and cod-liver oil. Transfusion, to be useful and promising, should be as frequently repeated as the want of the system for food suggests. As far as at present understood, it is comparatively useless, except to make up for the waste of sudden hæmorrhage. Its use in cachexia is simply absurd. — Bellevue Hospital Medical College sends us an announcement extensive enough for a Common Prayer Book, and promising enough to make all medical neophytes both successful and rich. Fortunately

it is FLINT-y at the centre, and therefore may evolve the Promethean spark of prosperity. — The Woman's Hospital Medical College of this city greets us smilingly for its sixth year. May it succeed! We have always desired for women their appropriate sphere, although differing somewhat from some of our contemporaries as to its real nature. The curriculum seems full and the faculty strong. It is to be regretted that under the heading "Preceptor" there is to be found the name of an infinitesimal specialist of the female persuasion. Will her name be admitted as that of an appropriate "Preceptor" when the student applies for graduation? — Professors Andrews and Quine, of this city, commend, in special letters, Messrs. Powers & Weightman's Sulphate of Cinchonidia, an article that seems growing in professional favor. — The establishment of a homœopathic department in the University of Michigan threatens tribulation to our ancient colleagues in the effort to "raise the standard." We extend to the brethren our sympathies. — The Alabama State Medical Association offers a prize of one hundred dollars, or a gold medal of equal value, for the best essay on "Bright's Disease." Anybody anywhere can compete. — The recent remarkable appointment of American medical students to positions in the Khedive's Army, in Egypt, proves the fraudulent device of a scheming impostor. There were no "millions in it." — Prof. Hammond has resigned the editorial charge of the *Journal of Psychological Medicine and Medical Jurisprudence*, and has been succeeded by Allen McL. Hamilton. — It is some comfort to learn that jaborandi, the new Brazilian medicine, in doses of fifty grains, will, in fifteen minutes, cause profuse sweating and excessive flow of saliva. "Sixteen ounces of distinctly alkaline saliva were collected in a few hours, and the sweating was so great as to soak the bed clothes." In addition to its moistening qualities, in large doses, jaborandi "causes tension of the accommodative apparatus of the eye." — The *American Practitioner* (July) contains, from the

pen of Lunsford P Yandell, M.D., a highly appreciative Memoir of the Life and Writings of Dr. John Esten Cooke. Medical biography has few names that deservedly rank higher. Three or four decades ago, and his opinions had larger influence in shaping Western and Southern practice than perhaps any other. All the older practitioners will readily recall his favorite pills, calomel, rhubarb and aloes. He thoroughly believed in calomel and the apostolical succession. — Our Canada *confrere* is out strongly in favor of cremation. It prefers Sieman's furnace to a coffin, and lively caloric to six feet of superimposed soil. Every one to their taste. In the thronged districts of the old world there is abundant argument for incineration, but on this continent there seems room and verge enough to allow poor bodies to rot at leisure. Time enough and space enough for that last banquet, where, as Hamlet observed, one does not eat, but is eaten. — The *Boston Journal of Chemistry* attributes the late disastrous explosion of the Dows apothecary store, in that city, to the ignition of the vapor of ether with atmospheric air. One part of the former to six or eight of the latter affords a powerful and dangerous explosive agent. Our ether-eal anæsthetic friends will please make a note of this. The argument is not all *versus* chloroform. — It is rumored that two of the occupants of important chairs in a well-known medical college have tendered their resignations. Known as long-time incumbents, there is much anxiety to ascertain what *is* or *was* in the wind. Before another issue, it is hoped the atmosphere will be calm. — Another case of entire absence of the pancreas is recorded—this time in Paris. — The venerable Dr. Bullard, of New Haven, Vt., who has been the earliest acquaintance of over a thousand youngsters, is to be complimented soon by a grand reunion pic-nic. The *Philadelphia Medical Times* suggests that *the* toast of the occasion will be: "The tie that binds us—Dr. Bullard—our common deliverer." — Prof. Zeissl, of Vienna, is said to believe syphilis ab-

solutely ineradicable from the system that has once received it. At a clinic recently, he exclaimed: "Some think when a patient has for sometime enjoyed immunity from manifestations of syphilis, that he is cured; but I tell you, gentlemen, that if a man contracts syphilis he will die syphilitic, and at the day of judgment his ghost will have syphilis!" It is to be concluded, however, a "spiritual manifestation" thereof. — Alfred Heap, an abortionist, was hung at Manchester, England, last April, for his crime. — Analogous to the writer's palsy comes the newly noted disease, "telegraph operator's cramp." — M. GALLARD (*The Doctor*) uses iodoform crayons, prepared by mixing iodoform in fine powder with gum arabic mucilage, shaping and drying *secund. art.* The crayons are to be kept in dark air-tight bottles, to prevent disintegration. — The *Danbury News Man* thinks the recovery of a baby from convulsions is an illustration of the Darwinian doctrine of "survival of the fittest." — Another batch of four babies at one confinement is chronicled by the *Detroit Review*. Daughters — two placentæ; labor, an hour and a half; avoirdupois, twenty-four pounds. — "There is a soul of goodness in things evil." A recent writer asserts that "the blue mould of cheese (*aspergillus glaucus*) is considered by epicures to give the cheese an agreeable flavor, and it is probable that it helps the digestion of other aliments. Again, a good portion of the stinking rust in flour is supposed not to render it unwholesome, at least when made into fermented bread. The flour is largely used in the manufacture of gingerbread, where the treacle disguises the color and flavor." Which, also, suggests another probable truth, that living spores, fungi, animalculæ and wigglers, *et id omne genus*, are not generally disease-producing, but evidences of the presence of decomposing, organic matter about always disease producing, but out of which these atoms of life get nourishment and size sufficient to lead ætiologists into funny misapprehensions. — Dr. DELAFIELD read a paper recently before the

Med. Soc. of the Co. of New York, in which he showed by statistics, that in pneumonia, the largest number of fatal cases occurred on the 7th day, the next largest on the 14th, the next on the 21st, and the next on the 28th. The end of each week, therefore, seems critical, and particularly the end of the first week. Perhaps, after all, "the fathers" were wise in their day and generation. — Dr. Robert C. Kedzie, of the Michigan State Board of Health, referring to poisonous wall paper, shows that arsenical papers are not limited to those of green color, but that all papers of delicate and "toned" colors may be regarded as suspicious. It gratifies the present writer that his whilome pupil and long time friend, Prof. Kedzie, is distinguishing himself by a great variety of practical researches in the etiology of disease. — *Medicus*, in the *Druggists' Circular*, recommends for sweating feet, the use of ten or fifteen grains of tannin dusted in the bottom of each clean sock—changes to be made every day, and dusting continued for two weeks for permanent cure. It would have been a good thing to have suggested, also, occasional washing of the pedal extremities. — The slangwhangers of the secular press have seized upon the case of the late Gen. J. C. Breckenridge, as they did upon that of poor "Jim Fisk," to make use of as an excuse for throwing mud at the profession. It is a cheap exercise of penny-a-line wit. It appears that Gen. Breckenridge had, as the result of an old injury received in the army, a hepatic abscess, which unfortunately opened through the bronchial tubes. Professors Sayre and Gross, as a forlorn hope, attempted to establish a more direct outlet for the pus. The operation proved unsuccessful, as the chances were immense that it would, and the poor man died. But it was an opportunity for the turkey-buzzards, and they have improved it. We have only to say, that when our last hours come, or our friends fear their approach, we ask no better counsel (nor could expect it) than that of the illustrious gentlemen whose names have been in this case made a target

for abuse in the case of Gen. Breckenridge. — Who nose? The Chinese, it is said, inoculate by blowing the pulverized virus into the right nostrils of boys and the left ditto of girls. The result is said in each case to be all right. — The Anthony case, at Leavenworth, is exciting general interest in the profession. That the other editor, shot about the same time, and in whose brains an ounce bullet of lead still remains without producing particular uneasiness, after the old Cavendish crowbar case, does not surprise, but in Col. Anthony, the lacerated subclavian, with its attendant injuries, aneurism and apparent probable cure, awaken much anxiety to read an authorized professional history of the whole matter. — Dr. Wetherly, of Alabama, asserts, in the *Atlanta Journal*, that so far from quinia being ecbolic as some believe, it is, on the contrary, one of the best agents for arresting uterine action. — Hydrate of chloral was recently exhibited in a case of infantile convulsions, by Dr. Bemiss (*N. O. Med. & Sur. Journal*) with really remarkable success. After seventeen distinct convulsions, “the child being black from head to foot, the surface cold, and the pulse and respiration completely suspended,” Dr. B. recommended using chloral by enema, the condition of the throat being such as to preclude swallowing. An injection containing $1\frac{1}{2}$ grs. of chloral was administered. Relief was immediate. Some hours afterward, a slight convulsion having recurred, the enema was repeated, and after deep sleep, recovery rapidly took place. — Dr. Geo. J. Huey, in the same journal, strongly advocates quinine in the treatment of pneumonia. He writes: “When called to a patient with cough, pain in one or both sides, fever, with difficulty in breathing, as the general symptoms, I order a dose of the comp. cath. pills of our dispensatory, apply a blister over the seat of pain, and give a cough mixture composed of syrup ipecac and paregoric or laudanum, with directions to give twelve gr. doses of quinine every four hours till three doses are taken—after operation of the pills.”

Second day continue treatment, but three doses ten grains each of quinine. Third day, same. Fourth day, same, except eight grain doses of quinine every four hours, etc. etc. Convalescence usually fairly established on the seventh day. No digitalis, verat. virid. or other arterial sedatives, no bleeding or mercury. Undoubtedly a better practice in malarious districts than the old evacuant and sedative plan. — Our Southern friends are happier because no "iron clad oath" is required at the great Centennial from any one except the U. S. Commissioners, and over these the Directors of the Centennial have no control. But *when* will "the cruel war be over," and iron clad oaths and all other relics of barbarism disappear? — Dr. A. D. Sinclair (*Bost. Med. and S. Journal*) prefers the fingers above all other methods of dilating the *os uteri*. They certainly have the advantage of always being on hand.

Editorial.

Valedictory.

With the completion of the present number the Junior Editor retires from the management of, and severs his connection with, the CHICAGO MEDICAL JOURNAL.

The necessity for taking this step has become more and more apparent for many months, during which the increasing demands upon his time, made by duties more strictly personal and professional, have left too little of it for the satisfactory performance of the duties of a journalist.

The preparation and delivery of a course of lectures on Neurology, at Rush Medical College, extending through nine months in each year, the Clinics during the entire year, and the charge of the Department of Nervous and Mental Diseases, at St. Joseph's Hospital, together with

the special character of his private practice, demand his exclusive attention to the field of neurological study, and forbid indulgence in the desultory work of editing a journal so general in its scope as this.

But the feeling of relief which comes when the editorial pencil is dropped at last from the wearied fingers, is mingled with regret at the discontinuance of associations maintained harmoniously during nearly eight years—associations which will always be recalled with gratification as unmarked by a single unpleasant incident, however trivial.

His thanks are due, and are most heartily rendered, to all his associates in the work, to Editor and to Publishers, who have so kindly and cordially co-operated with him to make that work successful, and also to the members of the profession at large, who have contributed their talents and their labor to make success secure. To these, and to all, who have endorsed his course in the conduct of the JOURNAL, by the evidences of their approval, with the best wishes for its and their continued success and prosperity, he bids a kind farewell. H.

Personals.

Dr. M. A. PALLER, formerly of St. Louis, is now Professor of Gynæcology in the Med. Dep. of the Univ. of New York.

Surgeon JOHN FULLERTON BEATSON has been appointed Surgeon General of the Bengal Army.

Prof. W. F. PECK, a former graduate of Rush Med. College, is President of the Iowa State Med. Society.

GODFREY WALKER—also a graduate of Rush, who has since devoted especial and successful attention to ophthalmic and aural surgery, locates in Rochester, N. Y., for the future. He has the best wishes and highest expectations of all who know him.

Prof. ALFRED C. POST has resigned the chair of Surgery in the Univ. Med. College, N. Y., and Prof. JOHN T. DARBY, late of South Carolina, reigns in his stead.

Dr. EDWARD B. STEVENS, late of the *Cincinnati Lancet*, announces a new publication, the *Central New York Jour. of Medicine and Surgery*. It will of course prove a success, for Bro. Stevens "knows how it is himself" from successful experience.

Prof. HUXLEY has over three hundred and fifty students in Edinburgh University.

MADAME BRES, who recently obtained a degree from the Faculty of Medicine in Paris, has been appointed the medical attendant of the Sultan's harem at Constantinople. It is reported that she was offered a large bonus if she would confine her practice strictly to the seraglio, but declined to do so, preferring more general work about the city.

HORACE WELLS—the dentist who did not (but almost did) discover anæsthesia, is being remembered by a colossal bronze statue to be erected in the city of Hartford—and our alphabetical friend Morton, who did discover it, has not, as we are aware, even a first-class tombstone. Such is fame! Even Boston allows its anæsthesia monument to stand uninscribed save to the discovery. The discoverer ignored.

Dr. WM. K. BOWLING, long time Editor of the *Nashville Journal of Med. & Surgery*, and late President of the American Medical Association, has finally retired from the editorial tripod. Since the days of DAVID MEREDITH REESE, the medical press of this country has not known a combination of qualities better adapted to adorn the editorial position. Personally genial and benevolent, they were alike sensitive to the slightest affront to the profession of their choice, and woe to the poor wight who aroused their anger. Under their hands medical journalism was no dry-as-dust cataloguing of stale facts and assumed truths, but a very chart and chronicle of the time vivified by all surrounding practical influences. But we have no time to-day for parallels or contrasts. The best wishes of all his ancient contemporaries and modern co-workers will follow him wherever he goes.

Prof. DE LASKIE MILLER gains a few days needed rest just now at Long Branch. It is safe for him because he is no politician, neither do we believe he could be tempted from the chair he so successfully fills by any office in the gift of the "government" now located at L. B., L. I.

The *Am. Med. Weekly* wickedly attacks the profession and the language, by asserting that "twisted hemp cures felons." This is not a *Personal*.

Prof. GROSS believes in blood-letting and disbelieves in the duality of syphilis. Alas! is it so? Are the true things not new, and the new things not true?

A volunteer correspondent, at Ann Arbor, of the *Philadelphia Med. & Surg. Reporter*, communicates that Prof. A. SAGER, Dean of the medical faculty, has resigned the position on account of the homœopathic complications.

It is understood that although the Board of Health of Chicago is in imminent peril of dissolution under the new city organization—nevertheless, the efficient superintendent, Dr. B. C. MILLER, is to be retained. We earnestly hope this is true.

EDITOR'S NOTE. The following communication was received by a distinguished alienist, a few days since, and is given to the professional world on its intrinsic merits, *verbatim, literatim, et punctuatim*. H.

CINCINNATI O. 16. June '75.

Dear Sir I take the liberty to address a few idears by way of suggesteng in the treatment of insane persons. Let their rooms always be with *Sothern Exposier*, *ie*, on the Sun side of the building and let in the sun light freely on their persons so as to cause profuse persperation daily, when, the sun shines: In other words give them sun baths daily, which will *vitalize* the whole system, and give vigor as it does to plants and flowers. For diet use much fresh fish as they contain phosforos which is food for the brain: also brand bread as the brand is the nutritious part of wheat and contains

phosphorus and will build up the brain &c. *Always have persons sleep with the head to the North*—then the electricity will run down the nervous system. The three suggestions I have practiced for years on myself, and on others with signal success. They may not be anything new to yourself, so I give them for what they are worth.

All agree that the Vitalizing practice for the cure of all diseases is the most successful and permanent. I think more of sun-baths, fish and brand as diet not only in insane cases, but for constant practice in families for the prevention and cure of diseases than all other modes of treatment put together, with sleeping with the head to the North.

Loot.

A NOVEL TREATMENT OF OBSTINATE VOMITING IN PREGNANCY.

By EDWARD COPEMAN, M.D., P.R.C.P., Senior Physician to the Norfolk and Norwich Hospital, President of the British Medical Association.

On June 9, 1874, I was summoned to a lady, thirty-five years of age or thereabouts, to consult with two other practitioners already in attendance. She was about six months gone in pregnancy, and was so reduced by almost incessant vomiting that great fears were entertained as to her safety. I noticed there was slight uterine action accompanying the sickness, and, on examination, I found the os uteri partially dilated so as readily to admit the finger. I thought it right, under the emergency, to advise bringing on labor without delay; the gentlemen present, however, expressed no little apprehension as to whether or not she would have strength to undergo the effort of parturition on account of the very depressed and exhausted state of her system. They nevertheless concurred in the advisability of the course I recommended, and asked me to perform the operation. I at once dilated the os uteri as much as I could with the finger, and could

feel the membranes and the head of the child. I tried to rupture the membranes with a telescopic female catheter (the only instrument at hand), but they were so flaccid and the head offered so little resistance, the catheter shortening itself also on my making pressure, that I could not succeed; and, thinking it wise to wait awhile before resorting to any other expedient, we retired to another room for further consultation. In about an hour we saw the patient again, and were surprised to find that a longer period had elapsed without sickness than before; and we again waited, in the hope that she might be able to take a little nourishment, and so be prepared to undergo any further proceedings. We waited another hour, and then another, but there was no return of vomiting; and we spent the rest of the night in watching, during the whole of which time she was improving, and we determined to let well alone. I left her early in the morning, and had a favorable account of her a few days afterwards. There was no return of sickness; she went on to the full period of pregnancy, was then delivered of a healthy child, and made a good recovery.

This case made a strong impression on my mind; and I wondered whether the relief to the vomiting, so urgent and threatening to her life, could have been effected by my having dilated the os uteri; and thus removed any undue tension that might be producing sympathetic irritation. It was not very long before I was called some distance into the country to consult about another case of vomiting during pregnancy of great urgency, occurring about the second month. The surgeon in attendance had adopted the best acknowledged medical treatment, and had arrived at the conclusion that artificial delivery would be necessary to save her life. With the full recollection of the former case, I examined the uterus, and found some degree of anteversion and the os patent enough to admit the end of my finger. I forthwith dilated it as much as I could, passing my finger all round, removing all puckering and making a smooth edge. She vomited only once slightly after this proceeding, and we left her with the understanding that, if the sickness continued, I should be summoned again in a few days to bring on abortion. This summons never came; but in about a fortnight I had a letter from the husband, stating that his wife began to get better an hour or two after I left, and that the sickness had entirely ceased. I have heard several times since that the patient is going on re-

markably well, and I believe she expects to be confined some time this month.

A third opportunity has since offered itself for a trial of this novel (as far as I know) treatment. On the 6th of the month (April, 1875,) I saw, in consultation with a very intelligent country practitioner, a lady in delicate health just entering the eighth month of pregnancy. She was the mother of nine or ten children, and her life was valuable. Generally during early pregnancy, and sometimes for several months together, she had been troubled with vomiting ; but during the last three weeks, the sickness had been almost incessant ; she could keep nothing down, and was in a very feeble and emaciated condition. She had, moreover, a considerable amount of albumen and some pus in the urine, a few casts also ; and fears were entertained of there being extensive kidney disease. There was, however, no dropsy, and our opinion was somewhat modified by the knowledge that the urine does often, during pregnancy in the latter months, contain a great deal of albumen. The patient was so ill that she would willingly have consented to artificial delivery, if really necessary. I examined the uterus, and, as in the other cases, found it patent, puckered, and dilatable, and I dilated it as much as I could with my finger, in the hope that the sickness might cease after such a proceeding. I should say that the usual remedies had been carefully employed without producing the desired effect. A few days after my visit, her husband called upon me to say that his wife had no return of sickness after I left, and was now able to take food without inconvenience, although he still thought her very weak and ill, and feared she would not recover.

On the 23rd, I received a very satisfactory letter from the surgeon in attendance, to the following effect : " There was never any urgent sickness after you dilated the os uteri, and the last week Mrs. — has frequently taken with relish and no inconvenience solid food, such as boiled mutton, with asparagus, and drunk home-brewed beer. This morning she was going on quite well ; she was not even faint or at all exhausted after her labor. I am very glad I called you in, for I now know how to proceed with cases of sickness in pregnancy. Should I meet with any more such patients, I will either ask you kindly to meet me again, or report them to you."—*British Med. Journal.*

PREVENTIVE MEASURES IN SYPHILIS.

Mr. Acton recently read a paper before the Royal Medical and Chirurgical Society of London, from which we make the following extracts:—

His paper commenced by stating that when he returned to England, after the completion of his studies in Paris, he was greatly struck with the severity and number of cases of syphilis in London, as compared with Paris, and as a consequence of this he brought the subject before the notice of the Society in 1846, and again in 1860, showing that the Belgian and French troops were much less attacked by venereal affections than the English. In 1873, he found that in districts in England where the troops were not what he called protected from the women, primary syphilis still existed in the proportion of 123 per 1,000 men annually. He maintained that syphilis could be prevented and stamped out by providing ready means of ablution, and destroying the local form of contagion, and warning male patients not to infect other persons. The institution of hospitals, whether free or otherwise, was one remedy, for treatment of prostitutes as out-patients was quite inadequate. They should be segregated as soon as diseased, and not allowed to leave hospital until they are quite cured. By doing this, as at Hong Kong and Dartmouth, the disease had been reduced to a minimum. In his visit to Brussels, in 1874, Mr. Acton had visited the Military Hospital, where he found only three cases of syphilis among the private soldiers, and two among the non-commissioned officers, out of a body of 3,500 troops. There were only nine women confined to hospital for venereal disease, showing that in Brussels the police inspection had nearly stamped out the disease. In Paris he visited the military hospitals, and could only discover six cases of primary disease, and eight of secondary syphilis, among 3,841 men forming the garrison of Paris. Disease among the females was very slight also, and Mr. Acton attributed this decrease to the police regulations. He gave a table showing that in the St. Lazare Hospital he only found 23 cases of primary disease among 202 patients in this prison, which is under the police surveillance. With respect to England, Mr. Acton said that Parisian medical men alleged that British travelers, like sailors, were the cause of much of the disease in Paris, and that the disease would ere now have been stamped out had it not been that England and other similar countries went on continually introducing fresh cases

into Paris. In London he found at the hospital of the Foot Guards 24 cases of primary disease among 408 single soldiers in the second battalion of the Coldstream Guards quartered in London. In the first battalion of the Scots Fusilier Guards he found 25 cases of severe forms of syphilis among 505 unmarried men. He handed in a table extending over a year, which showed that one-fifth of the whole troops quartered in London in 1874 were affected with primary sores, which would have incapacitated the men from duty for a period of six weeks on an average. Perhaps 164 of these men would have secondary disease, requiring mercury, which would further incapacitate them from duty for a period of two months or so, and this would debilitate them greatly. Comparing the syphilitic affections of the Foot Guards with those among the troops quartered in Paris, he showed that 500 troops in London had more disease than 3,841 quartered in Paris. Mr. Acton considered that one-half the prostitutes in London were diseased; whereas of those in the districts under the Contagious Diseases Acts only about eight per cent. were found affected at periodical examinations. It appeared that at Woolwich, during 1871-2-3, only 1,085 cases of primary sores were treated in hospital, out of a garrison of 18,250 men, or only one man was infected in seventeen soldiers, instead of one in six, as in London. He therefore, in conclusion, looked upon the advantages of supervision of prostitutes as no longer a problem, but as an undoubted fact.—*M. & S. Reporter.*

VOCAL FREMITUS IN PLEURISY AND PNEUMONIA, AND THE USE OF THE HYPODERMIC SYRINGE IN THEIR DIAGNOSIS.

BY E. G. JANEWAY, M.D., NEW YORK.

The value of vocal fremitus as a physical sign in the diagnosis of pleurisy, with effusion from pneumonia, is, it seems to me, not infrequently rated too highly. Some, in fact, appear to consider it an absolute means of distinguishing the one from the other condition. My reasons for not esteeming it as much as those who hold this opinion, are based upon the observation of cases in which such a belief would have been or proved to be a mistake. Let me first give a brief record of two cases of pleurisy with effusion, in which vocal fremitus was pres-

ent over the affected portion. The first of these was a male patient in Ward 8 of Bellevue Hospital last summer (Simms), age 33.

He was taken sick two days before admission with rigors and a pain in the left side. When admitted the physical signs of interest were: Flatness on percussion on the right side of the chest below the angle of the scapula, increase of vocal fremitus over the affected portion, feeble and distant respiratory sounds, ægophonic vocal resonance.

June 3d, two days later, distinct vocal fremitus was present over the affected portion, and a hypodermic syringe withdrew clear serum from the pleural sac at this part.

Aspiration of the affected side was performed several times, with only partial relief, and in consequence of obstruction of the needle, or failure of the apparatus, on two occasions but little fluid was obtained. After the second aspiration air was detected in the pleural cavity above the level of the remaining fluid, but below this vocal fremitus persisted. Later sero-pus and pus formed in the cavity, and it was decided to make an opening in the pleura, and allow the fluid to drain off. The reasons for the operation were the great dyspnoea, the existence of pus in the sac, the failure of aspiration to afford relief which was more than temporary, the increasing weakness of patient, and finally paroxysms, during which the patient would pass almost into a state of collapse. The day following the incision vocal fremitus disappeared from the affected portion. On the 12th of November the patient was discharged.

The second patient was a male, fifty years of age, admitted to Bellevue Hospital on the 17th of November, 1874. His illness had commenced one month before, with symptoms which pointed to the existence of pneumonia on the left side. When admitted he was thought to have a chronic pneumonia, or pleurisy with pneumonia of left lower lobe, extending into upper. Of this man I made a very careful examination about a week before his death. The following physical signs were then present: Flatness on percussion existed over the lower lobe of the left lung, except near its most anterior portion; here there was some resonance.

Bronchial voice, whisper, and respiratory murmur were heard over this part more distinct above, more distant and feebler below.

Measurement showed the two sides to be of equal size. The heart was not displaced, and vocal fremitus existed over the affected portion, and was increased as compared with the opposite side.

There was no change of the level of flatness on percussion, and this line of flatness corresponded very closely to the interlobar division. The character of the bronchial breathing and voice made me suspect fluid, and so at my request the House Physician, Dr. Chapin, introduced the needle of a hypodermic syringe in the pleural sac, but failed to obtain any fluid. The hypodermic syringe seemed to be good, as tested by drawing up water from a tumbler. I then proposed bringing an aspirator on the succeeding day, for more thorough exploration, but the patient passed into a typhoid state, seeming to indicate the existence of meningitis as a complication. A post-mortem examination revealed the following: Dilatation of the ventricles of the brain, with a granular condition of the ependyma, and empyema of the left side, corresponding to the site of the left lower lobe, and shut in by adhesions of the upper lobe. A small portion of the anterior part of the lower lobe was adherent to chest, near heart, and the rest was carnified and pressed upwards, inwards and backwards.

The heart was not displaced. The lower part of the upper lobe of the left lung was hepatized. There was no adhesion of the lung over the space where I had perceived vocal fremitus; nor was any band-like adhesion, such as sometimes occurs, present.

These two cases, which have been observed within a period of eight months, are sufficient to show that vocal fremitus may be present over fluid in the pleural sac, and may even be exaggerated. The disappearance of the vocal fremitus, in the one case after the removal of the fluid, and the results of the post-mortem examination in the other, show that the vocal fremitus was conducted through fluid to the chest wall.

In addition to these cases, I have observed two others during the same period, in one of which a slight vocal fremitus existed over fluid in the left pleural sac. This was enough to cause one physician to doubt the correctness of the diagnosis, though the left side was two inches larger than the right, and the heart displaced. He, however, confessed when a hypodermic syringe drew fluid from this portion, and an aspirator removed sixty ounces of serum.

In the other case the vocal fremitus was increased, but of this I will make no use, as the patient escaped from my observation, before I was able, satisfactorily, to determine the conditions present.

Again, cases present themselves in which the vocal fremitus is exceedingly feeble or absent on the healthy side, and then the absence of this sign has no especial value on the diseased side.

Such a case I have lately seen in a young man with rheumatic pericarditis and a small effusion in the left pleural sac. In this case vocal fremitus is absent at corresponding points on the two sides, but above the level of the fluid, for a short distance, it is considerably increased on the left or affected side: while at a corresponding point on the right side it is only feebly perceptible. Bronchial character of the expiratory sound is audible over the fluid, and broncho-ægophony exists near its upper limit. I can very readily imagine that an incomplete examination might lead to the supposition of pneumonia. While I have been writing this article the fluid has accumulated somewhat on the right side also, but the vocal fremitus remains as at first. On the other hand cases have occurred in which pneumonia has been mistaken for pleurisy, with effusion, by very good observers.

Some years ago I made the post-mortem examination in a case of supposed pleuritic effusion. The autopsy revealed a small aneurism resting on the left main bronchus, and this completely occluded by a firm thrombus which had formed by the escape of blood from the aneurism into it by means of a small opening. The left lung was throughout in a state of gray hepatization, and its bronchi were filled with purulent fluid. Those who had seen this case, during life, stated that all the signs of pleuritic effusion had existed, absence of vocal fremitus, of respiratory murmur, of vocal resonance, with the existence of flatness on percussion. If any suspicion of the real condition of affairs had been entertained it seems probable that absence of displacement of the heart, and of increase of the measurement of the affected side might have corrected the diagnosis, considering the extent of disease. Since that time I have seen a second nearly identical case.

Again it sometimes happens that with ordinary pneumonia producing complete solidification of a lobe, considerable diminution or absence of the vocal fremitus may occur.

Allow me, in closing this short article, which is written in order to draw attention to the need of caution in the interpretation of physical signs, to urge the importance of attending to each physical sign in doubtful cases of these two diseases, and also of examining the symptoms presented by the patients, and the course which the disease takes. In doubtful cases, where, if fluid should exist, the line of treatment would be decidedly different, I think it wise to make use of an exploratory puncture. This may be done by means of a small needle attached to the aspirator, or, as this not infrequently alarms patients, at Bellevue Hospital a hypodermic syringe is often employed for this purpose. Considerable difference exists in the suction power of these instruments, and I have seen one introduced in a chest and fail to obtain fluid when another immediately afterwards succeeded. The safest test is not that of seeing whether water can be drawn through the needle into the barrel of the syringe; but, placing a finger over the nozzle, withdraw the piston and retain it in this position for a few seconds, and then note if the atmospheric pressure will force the piston back to its original position. With one, which answers perfectly to this test, I have succeeded in drawing pus from abscesses; and lately, in order to give it a fair test and also to relieve a patient, I employed it to remove thick gelatinous fluid from a ranula. This fluid was a little more viscid than the mucus of cervix uteri. If honest doubt existed after its use it would be wise to make use of an instrument with greater suction force.

Summary of the conditions of vocal fremitus in pleurisy and pneumonia:

1st. Local fremitus is usually absent over fluid in the pleural sac.

2nd. When present (*a*) it is sometimes due to adhesions of the lung to the chest wall below the level of the liquid.

b. Again, it is sometimes conducted through the fluid, and then it may be either feebler or more intense than on the opposite side.

c. In some cases vocal fremitus does not exist or is very feeble at the lower part of the chest on the sound side; under these circumstances its absence on the diseased side loses some of its relative value.

3rd. Vocal fremitus is usually increased over pneumonia of the lower lobe.

4th. It may, however, be very feeble or absent..

a. This may be due to obstruction of the bronchus by compression, or by the accumulation of some material in it, as, in one of the cases reported, coagulated blood.

b. Sometimes it seems due to the presence of a considerable amount of exudation in the pleural sac.

c. The amount of solidification is supposed at times to be the cause.

5th. Vocal fremitus is sometimes absent on the sound side; under such circumstances the existence of considerable vocal fremitus on the diseased would point strongly towards, though not be decisive of, pneumonia, as the morbid condition present.

My friend and colleague, Prof. Flint, is also in the habit of drawing attention to the greater value of absence of vocal fremitus on the right side as a sign of pleuritic effusion, and of its exaggeration on the left side as a sign of pneumonia, in view of the normal difference of vocal fremitus on the two sides.

It will be obvious, that in this article I have considered that the more important physical signs, percussion and auscultation, have pointed out the site of the disease, but have not been able to establish the diagnosis.—*N. Y. Medical Record.*

Illinois State Medical Society.

SECRETARY'S OFFICE,
296 W. MONROE ST., CHICAGO, May 25, 1875.

Dear Doctor—At the 25th Annual Session of the Illinois State Medical Society, held in the city of Jacksonville on the 18th, 19th and 20th days of May, 1875, the following officers were elected, and committees and delegates appointed for the ensuing year; also, the appended resolution was adopted, and the Secretary instructed to furnish a copy of said resolution to each and every member of the Society.

OFFICERS:

President—THOMAS D. WASHBURN, M.D., Hillsboro.
First Vice-President—J. L. WHITE, M.D., Bloomington.
Second Vice-President—JOHN WRIGHT, M.D., Clinton.
Treasurer—JOHN H. HOLLISTER, M.D., Chicago.
Permanent Secretary—T. DAVIS FITCH, M.D., Chicago.
Assistant Secretary—C. B. JOHNSON, M.D., Toleno.

STANDING COMMITTEES:

Board of Censors—E. Wenger, Gilman, Chairman; E. Ingals, Chicago; E. L. Herriott, Grafton.

Committee of Arrangements—S. H. Birney, Urbana, Chairman; A. T. Dana; J. T. Pearman, Champaign.

Practical Medicine—Wm. Massey, Grandview, Chairman; D. L. Jewitt, Watseka; J. W. Fink, Hillsboro.

Committee on Surgery—Moses Gunn, Chicago, Chairman; A. C. Rankin, Loda; John G. Hays, Paris.

Committee on Obstetrics—M. W. Walton, Ridott, Chairman; C. Goodbrake, Clinton; D. E. Foote, Belvidere.

Drugs and Medicines—John H. Etheridge, Chicago, Chairman; T. J. Pitner, Jacksonville; H. H. Hood, Litchfield.

Necrology—G. W. Albin, Neoga, Chairman; Wm. Chambers, Charleston; J. N. Niglas, Peoria.

Ophthalmology—E. L. Holmes, Chicago.

Otology—F. C. Hotz, Chicago.

SPECIAL COMMITTEES:

Diseases of Children—J. S. Williams, Otterville.

Medical Jurisprudence—M. A. McClellan, Knoxville.

Dermatology—J. Nevins Hyde, Chicago.

Progress in Physiology—Sarah Hackett Stevenson, Chicago.

Idiocy—C. T. Wilbur, Jacksonville.

Neurology—Walter Hay, Chicago.

Gynæcology—A. Reeves Jackson, Chicago.

Hygiene—Jehu Little, Leroy.

Diagnosis and Extirpation of Tumors—W. L. Goodell, Effingham.

Empiricism—J. F. Todd, Galva.

Prudence in the Administration of Therapeutic Agents—E. Ingals, Chicago.

Uterine Displacements—T. Davis Fitch, Chicago.

Staphylophary—David Prince, Jacksonville.

Electro-Therapeutics—Plym. S. Hayes, Chicago.

The Treasurer and Secretaries constitute the Committee on Publication.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

S. C. Plummer, Rock Island; Walter Hay, Chicago; J. F. Todd, Galva; J. B. Rood, Lemont; F. B. Haller, Vandalia; D. E. Foote, Belvidere; J. W. Freer, Chicago; J. H. Hollister, Chicago; T. P. Peirce, Lemont; Moses Gunn, Chicago; N. S. Reed, Chandlerville; H. B. Buck, Springfield; Thomas J. Whitten, Irving; Wm. L. Goodell, Effingham; David Prince, Jacksonville; G. Wheeler Jones, Danville; J. Adams Allen, Chicago; E. P. Cooke, Mendota; Dr. Darrah, Urbana; M. W. Walton, Ridott; M. Shepard, Adams Co.; C. Goodbrake, Clinton; J. O. Hamilton, Jerseyville; Lester Curtis, Chicago; T. Davis Fitch, Chicago; E. R. Williard, Wilmington; William A. Haskell, Edwardsville; Robert Boal, Peoria; C. T. Wilbur, Jacksonville; J. M. Steele, Grandview; L. Clark, Rockford; O. Everett, Dixon; T. D. Washburn, Hillsboro; William A. Elder, Bloomington; C. Paul Simon, Chicago; E. Ingals, Chicago.

DELEGATES TO STATE MEDICAL SOCIETIES.

Iowa—Walter Hay, Chicago; T. Davis Fitch, Chicago.

Missouri—F. B. Haller, Vandalia.

Indiana—W. W. McMann, Gardner.

Minnesota—S. C. Plummer, Rock Island.

New York—W. P. Peirce, Lemont.

RESOLUTION.

Resolved, That at the next, and all subsequent meetings, all Reports of Committees and other Papers designed for publication in the Transactions of this Society, be presented in a form ready for publication, and placed, when read, at the disposal of the Publishing Committee.

Yours, very truly,

T. DAVIS FITCH,

Permanent Secretary.

International Congress of Ophthalmology.

The International Congress of Ophthalmology will meet in New York City, on Tuesday, September 12, 1876, at twelve o'clock noon. The following extracts from the rules of the Congress will give an idea of the general character of the Society, and of the terms of membership :

"1. The object of the International Periodic Congress of Ophthalmology is to promote ophthalmological science, and to serve as a centre to those who cultivate it. It will entertain no discussion foreign to this object.

"2. The number of members is unlimited.

"3. Every member must be either a doctor of medicine, or surgery, or of science, or possess some other equivalent degree, or be distinguished for his scientific knowledge.

"4. Candidates for admission into the Society shall be admitted on presentation of their diploma or of their scientific title, unless ten members demand a ballot.

"5. The sessions of the Society shall take place every fourth year, and be limited to ten days."

"11. The Society gives no diploma. Before the opening of each session a card available for admission to all the meetings, and signed by the President and Secretary, shall be given to each member on payment of his subscription (fixed at \$2), and upon signature of his name on the register of those attending the meeting."

Among the members of this Congress, are such men as Arit and Stellwag, of Vienna ; Giraud-Teulon, Javal, and Wecker, of Paris ; Helmholtz, of Berlin ; William Bowman, George Critchett, R. Liebreich, J. W. Hulke, and Soelberg Wells, of London ; Donders and Snellen, of Utrecht, Holland.

It is hoped that many of them will come to New York in 1876. The committee are making all efforts to secure a large attendance, and one that will leave its mark upon the progress of scientific ophthalmology. The co-operation of the profession of the United States, in securing these objects, is earnestly desired by the undersigned, the Provisional Committee appointed in London, in 1872.

CORNELIUS R. AGNEW, M.D.

HENRY D. NOYES, M.D.

DANIEL B. ST. JOHN ROOSA, M.D.

Chicago Mortality Report for June, 1875. Reported by Dr.
BEN. C. MILLER, Sanitary Superintendent.

Accident, crushed.....	1	Gastritis	2
“ drowning	8	Hæmatemesis	1
“ explosion	2	Heart, disease of	3
“ fall	3	“ rheumatism of	1
“ run over by wagon	1	“ valvular disease of	4
“ kicked by horse	1	Hepatitis	1
“ poison	2	Hernia, incarcerated	1
“ railroad	1	Hydrocephalus	12
“ street cars	1	Inanition	15
“ shooting	1	Intemperance	2
Abscess, lumbar	1	Intussusception	1
Anus, imperforate	1	Kidneys, Bright's disease of	6
Apoplexy	11	“ inflammation of	2
Atelectasis pulmonum	1	Liver, atrophy of	1
Bladder, inflammation of	1	“ disease of	1
Bowels, obstruction of	1	“ cirrhosis of	1
“ hæmorrhage of	1	Lungs, congestion of	2
Brain, compression of	1	“ emphysema of	1
“ congestion of	8	“ hæmorrhage of	1
“ disease of	1	“ œdema of	1
“ inflammation of	10	“ paralysis of	1
“ softening of	2	Manslaughter	2
Bronchitis	5	Malformation	1
“ capillary	7	Metro peritonitis	1
Catarrh	1	Measles	18
Cancer	1	Meningitis	17
“ of breast	2	“ cerebro-spinal	7
“ of stomach	3	“ tubercular	5
“ of uterus	5	Myelitis	1
Child birth	2	Old age	12
Cholera infantum	33	Paralysis	2
“ morbus	1	Pericarditis	1
Consumption	48	Peritonitis	5
Convulsions	62	“ puerperal	1
“ puerperal	2	Purpura	1
Croup	6	Pneumonia	21
Cyanosis	3	“ typhoid	3
Debility, general	7	Pleurisy	1
Deficient development	1	Pyæmia	3
Diarrhoea	17	Rheumatism	1
“ chronic	1	Scrofula	3
Diphtheria	7	Septicæmia	1
Dropsy, general	6	Small-Pox	1
Dysentery	5	Spine, disease of	1
Embolism	1	Stone in bladder	1
Endo carditis	4	Sun stroke	2
Eczema	1	Suicide, by laudanum	1
Enteritis	9	“ by drowning	1
Enterocolitis	3	“ by hanging	1
Epilepsy	1	Syphilis	2
Erysipelas	4	Tabes mesenterica	10
Fever, congestive	1	Teething	3
“ puerperal	2	Tetanus	2
“ remittent	1	Tedious birth	1
“ scarlet	15	Trismus	1
“ typhoid	4	Tumor, on neck	1

Tumor, shock from operation.....	1	Whooping cough.....	4
Vitality, deficient.....	1	Total.....	533

Premature births, 9; Still births, 47. Total, 56.

COMPARISON.

Deaths in June, 1875, 533; in May, 1875, 603. Decrease, 70. Deaths in June, 1874, 542. Decrease, 9.

AGES.

Under one year.....	210	Thirty years to forty.....	48
One year to two.....	52	Forty " " fifty.....	41
Two years to three.....	21	Fifty " " sixty.....	23
Three " " four.....	8	Sixty " " seventy.....	18
Four " " five.....	7	Seventy " " eighty.....	14
Five " " ten.....	26	Eighty " " ninety.....	11
Ten " " twenty.....	23	Total.....	533
Twenty " " thirty.....	34		
White.....	520	Males.....	288
Colored.....	13	Females.....	245
Total.....	533	Married.....	163
		Single.....	370
		Total.....	533

NATIVITIES.

Austria.....	2	Denmark.....	1	Norway.....	6
Belgium.....	1	England.....	8	Poland.....	2
Bohemia.....	7	France.....	1	Scotland.....	3
Canada.....	5	Germany.....	61	Sweden.....	2
Native—Chicago.....	88	Holland.....	2	Switzerland.....	2
Foreign, ".....	204	Ireland.....	46	Unknown.....	3
U. States, other parts.....	87	Italy.....	2	Total.....	533

Deaths daily, 17 $\frac{1}{2}$. Mean thermometer, 63°. Rain fall, 5.17 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.	one death in	Wards.	No. Deaths.	Pop. in 1874.	Percentage.	one death in
1	2	5,725	2,862	11	13	14,022	1,078	1,119	
2	1	4,830	4,830	12	15	16,792	1,376	983	
3	18	14,861	826	13	13	17,892	913	717	
4	9	15,361	1,707	14	17	16,720	442	913	
5	22	20,078	913	15	103	45,545	792	668	
6	42	35,916	855	16	24	21,922	899		
7	33	31,722	961	17	29	20,777			
8	36	29,143	809	18	27	21,392			
9	42	31,654	754	19	7	4,677			
10	15	17,385	1,126	20	10	8,995			

Ratio of deaths to population in 1874, one death in 743 $\frac{1}{2}$.

No. deaths in Wards.....	478	Manslaughter.....	2
Accidents.....	21	Small-Pox Hospital.....	1
Bridewell.....	1	St. Joseph's Hospital.....	1
County Hospital.....	6	" " Orphan Asylum.....	1
Foundlings' Home.....	16	Snicides.....	3
Hospital Alexian Bros.....	2	Total.....	533
Mercy Hospital.....	1		

THE
Chicago Medical Journal
AND
EXAMINER.

VOL. XXXII. — SEPTEMBER, 1875. — No. 9.

Original Communications.

**AN INSTANCE OF PERIODICAL BLOOD-LOSING BY
VENESECTION.**

READ BEFORE THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS, AUG. 9, 1875,

BY E. WARREN SAWYER, M.D.

MR. PRESIDENT AND GENTLEMEN :

The case to which I ask your attention for a moment, is an extraordinary instance of habitual venesection, extending through a long period of years.

The subject of this unusual habit is a retired clergyman, now eighty years of age ; and notwithstanding the fact that his blanched face and his slightly stooped shoulders might lead one to conclude that he is a feeble old man, his firm step and keen intellect show an unusual degree of preservation for his advanced years ; while his tall stature and immense frame speak of the great physical development which he enjoyed in his youth and early manhood. He has told me that he was an unusually vigorous man, and his entire life has been singularly free from sickness.

He was the son of a farmer, and in his boyhood, worked with his father on the farm. When he was seventeen years old, in the spring of the year, he yielded to the

custom which prevailed universally at that period, and was bled for the first time, for no especial reason ; this habit of spring time bleeding was followed for the succeeding six years, when he entered college to prepare for the ministry. One of the effects of giving up the active work of a farmer, for the sedentary habits of a student, was a constant heaviness, to relieve which, he resorted oftener to the lancet of his physician, who, in those days, was ever ready to "let blood." During the next ten years, he was bled four to six times each year ; always losing from ten to fifteen ounces of venous blood. During the few succeeding years, the frequency of his bleedings was gradually increased, until, at the age of forty, he demanded to be bled once in three weeks ; nor has the frequency of the bleedings, or the amount of blood taken, ever grown less. For forty years, has this man suffered the extraordinary loss of eight or ten ounces of blood regularly every three weeks. Some idea of the magnitude of this loss may be formed, by recalling that during this long period, the body of this man has manufactured more than a barrel of blood, which has been taken from his veins ! He declares that he was always made better by the bleeding ; that letting a half a bowl of blood was like stimulating him ; at all events, there is, in his long, active life, ample proof that the frequent blood-letting has never been especially detrimental to his health ; for, until he retired from the pulpit, ten years since, he was a hard working minister and for many years a circuit preacher, in Western New York, and frequently was forced to make large circuits on horse-back, exposed to the inclemency of all seasons ; still his health has ever been good ; nor is he to-day incapable of work—within a month he has assisted in the public dedication of a church in this city.

I made the acquaintance of this gentleman about two and a half years since, in Detroit, when I learned his singular habit ; for the past nine months he has been residing with a daughter in this city, and has been under

my direction ; during this time I have not once failed to bleed him every three weeks, letting from eight to ten ounces of blood.

The demand for the blood-letting is shown by a dyspnoea, which he suffers the last three days and nights of the interlude ; so extreme is this, usually, that he is obliged to spend the night in his chair, just before his bleeding day ; besides the dyspnoea, there are other evidences of almost venous stasis in the dark, livid lip and the purple finger nails. Immediately after the bleeding, all dyspnoea has disappeared ; the lip is red, and the finger nails are no longer purple ; besides this, the spirits of the old gentleman seem lighter ; he grows talkative ; his voice is no longer husky, and he seems in every respect better.

The appearance of the blood which is drawn presents nothing unusual ; compared with the blood of healthy subjects, under the microscope, there does not seem to be a paucity of corpuscular elements.

I have made frequent auscultatory examinations of his lungs and heart, with this result, viz., the percussion resonance is slightly increased, over both lungs, more especially at the apices, and the respiratory murmur is less intense than one would expect through such thin chest-walls ; in short, there is evidence of a moderate degree of vesicular dilatation. In this connection I may add that he has had, for years, a slight bronchial catarrh, but has never suffered from spasmodic asthma.

I elicited no evidence of organic change in his heart ; the sounds are heard feeble but uncomplicated. The action of the heart is not rhythmical ; strictly there is no intermission in its revolutions ; a contraction of the organ is not omitted, but quite regularly, once in about seven pulsations, there occurs a too short interval between the revolutions ; sometimes two of these short intervals are consecutive and then the normal rhythm is observed for a moment. After bleeding, the abnormally short intervals occur less frequently than before.

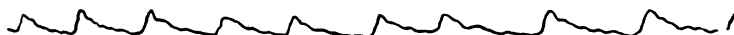
With a view of learning the effects of the bleeding upon the character of the radial pulse, the effects which were too slight to be appreciated by other modes of examination, I have resorted to the sphygmograph, and have taken tracings, at three different degrees of pressure, both before and after the bleeding.

The tracings taken at 0° pressure, one just before bleeding, the other immediately after the bleeding, are not unlike, and present no distinctive features. But by comparing the tracings taken respectively at pressure 2½° and 5°, one of each taken immediately before bleeding, the others thirty minutes after the bleeding, it is readily seen that the amplitude in the second tracing is greater than in the first; showing that the force of the heart's impulsion, in this instance, is really increased by diminishing the volume of the blood.

No. 1. Immediately before bleeding, Pressure 2½°.



No. 2. Thirty minutes after bleeding, Pressure 2½°.



No. 3. Immediately before bleeding, Pressure 5°.



No. 4. Thirty minutes after bleeding, Pressure 5°.



It is important to observe that the radial artery felt beneath the finger like a hard, round cord, and the artery followed a serpentine course; probably its walls are the seat of atheromatous change.

Further, I may add that the seat of the phlebotomy was always at the bend of the elbow; sometimes the median basilic, at other times the median cephalic vein, of the right or left side, was the vein chosen; and, notwithstanding the cicatrices which marked the innumerable wounds somewhat obscured the anatomical relations of the region, still bleeding was never difficult.

The interesting features which the history of the case contains are, viz.:

First, the physiological interest which is attached to the fact that the blood-making function of this man's body has always been unusually active; and further, that there has never been a demand for a peculiar diet, beyond the fact that his appetite for animal food has always been noticeable; his digestion is still unimpaired.

Second, the clinical interest which belongs to the fact that the frequent and large losses of blood have never seemed to be hurtful or debilitating.

Third, the practical importance of observing great circumspection in repeating venesection at short intervals, else the habit of periodical blood-losing might be established; and this habit, which necessarily subjects the victim to great annoyance, and pain, would, in a less favorable subject, be destructive.

Finally, the question may be asked, could not the habit of periodical blood-losing have been averted in this case? or, when the habit was formed, could it not have been relinquished? The history shows that the first bleeding was not actually demanded; the same is also true of many succeeding bleedings. Undoubtedly there have been periods when it was practicable to break up the habit, either gradually or suddenly; but for many years past, and especially during my acquaintance with the gentleman, I am of the opinion it would have been detrimental to him, and perhaps fatal, to have attempted a reformation: nor is it probable that his future will offer a moment when the habit can be abolished.

“WARM AND HOT WATER IN SURGERY.”

By C. HENRI LEONARD, M.D., DETROIT, MICH.

This article is not written so much to call attention to the efficacy of this plan of treatment, as to set aright some of the current opinions as to its originator.

The recent publication of Prof. Hamilton's *brochure* in your columns, has more particularly called my attention

to the matter. Therein it seems to be fathered upon the French Surgeon, Amussat; possibly, though, in the translation Prof. Hamilton refers to, *The Use of Water in Surgery*, proper reference to old authorities has been made. I have not the *Buffalo Journal* at hand to refer to, in which Prof. Hamilton's translation was published, so presume upon your patience to the following amount of quotations from the good old Hippocrates.

Hippocrates was a firm believer in the efficacy of hot and warm water; indeed, his works upon "Ulcers," "Fractures," and "Dislocations," teem with it. In his 22d Aphorism, Sec. V, (Adams' translation), he says: "Heat is suppurative, but not in all kinds of sores; but when it is, it furnishes the greatest test of their being free from danger. It softens the skin, makes it thin, removes pain, soothes rigors, convulsions and tetanus. *It is particularly efficacious in fractures of the bones, especially of those which have been exposed, and most especially in wounds of the head, and in mortifications; in herpes exedens, of the anus, of the privy parts, THE WOMB, the bladder, in all these cases heat is agreeable, and brings matters to a crisis, but cold is prejudicial and does mischief.*"

The italics, etc., in the above are my own. You notice it covers almost entirely the ground gone over by Prof. Hamilton, and is laid down in so positive a way, as really to surprise me that all reference to this statement by Hippocrates should have been overlooked. There is another point to be taken into consideration, "the womb." Dr. Emmet lays claim to the originality of hot-water uterine applications; he has told me so by word of mouth, adding that he got the idea from the late Dr. Pitcher, of this city. On p. 21 of his brochure upon "The Philosophy of Uterine Disease," published last year by the Appletons, he refers to the same in a foot-note, ending it with, "Certainly no one in this country is on record as an advocate for the practice previous to myself; and, as far as I have been able to ascertain, the same is true in

regard to the practice of gynæcologists abroad." Yet, you can see how plainly the practice (in theory at least) was understood by the old Hippocrates. I shall refer to this hot-water uterine treatment, in another Hippocratic statement, before I am through.

It was customary with Hippocrates, as the aphorism indicates, to use hot water freely in fractures, etc.; hence it is with no surprise that we find the following in his "Surgery:"—"As to the temperature and quantity of the water used, its heat should be just such as the hand can bear [about 110° Fahrenheit, C. H. L.], and it ought to be known that a large quantity is best for producing relaxation and attenuation [does he not mean by that what we now call a contraction of the arterioles, veinlets and capillaries, *a la* Emmet? C. H. L.], whereas a moderate quantity is best for incarnating and softening. The limit to the affusion is, to stop when the parts become swelled up, and *before the swelling subsides* [the stage of "pelvic contraction," of Emmet, C. H. L.]; for the parts swell up at first, and fall afterwards."

In "Fractures," he says: "When you remove the bandages, you must pour hot water on the arm and bind it up again." In another place in the same treatise, he says: "At each time the bandages are taken off, much hot water is to be used; for *in all injuries at joints* the affusion of hot water in *large* quantities is to be had recourse to." In still another place in the same treatise, he refers to the practice in this wise: "We must avoid wetting it [an exfoliating fracture] at the beginning with anything *cold*."

In the "Mochlicus," he says: "They [dislocations] should have more copious affusions of water" [hot.] He reiterates the same expression still farther on when treating of the special dislocation of the os calcis.

Again, in the "On the Use of Liquids," one of the treatises generally ascribed to Hippocrates, we have this hot-water question pretty thoroughly canvassed. I give but three condensations: Hot water promotes ulceration in all cases, softens the skin, attenuates it, is anodyne,

soothes rigors, spasms and tetanus, etc. Again: It is *most particularly applicable in fractures*, when the bone is laid bare, and especially in injuries of the head. [I have found the most immediate relief, and really quite permanent, from hot-water douches (two quarts or more) in cases of acute nasal catarrh. In my own person, I rarely employ anything else. I always add a tablespoonful of common salt to the water, and when taken at or near bed-time, it produces speedy languor and sleepiness; probably from the contraction of the brain arterioles. Some of the most violent cases of hemicrania (paralytica, probably), I have found greatly relieved by *hot fomentations*, when ice was unbearable; I remember a case, in particular, where everything had been used most assiduously for 24 hours, and yet the patient, a male, about 40 years of age, was fairly blind with pain. At last *hot water* suggested itself, and after the second removal of the flannel compress, the patient was in a sound sleep. He had no return for some ten days, the longest time of immunity he had had in some time.] Again, quoting from this treatise: Hot water agrees with all ulcerations in herpes exedens, in blackened parts, [gangrenous?] and in diseases of the ears, anus, and *womb*.

The quotations certainly show that hot water was in common use by the ancients for the very same purposes that we now apply it; the only difference seeming to be in the manner of its employment in the case of fractures; they employed prolonged affusions, whereas now we are recommended by Hamilton to use the constant bath, or else, (still nearer the Hippocratic manner,) "*thoroughly saturated fomentations*."

Since I received verbally from Dr. Emmet the wonderful effects of hot vaginal douches, I have had them in constant use among my female patients. They are one of the best "soporifics" that a hysterically nervous female can take. I always take especial pains to order one at bed-time, in these cases, and rarely fail of getting a good night's repose for my patients. They soon "see how it is themselves," and become actually solicitous for their

nightly douche. Yet, even this soporific tendency was well known in the days of Hippocrates, for he speaks of it as one of the *sequelæ* of hot water applications.

Prof. Agnew, of New York, was the first, and, if I remember aright, the only one I have heard to recommend continuous baths of hot water for the eyes, in certain corneal irritations, and chronic granulations. Following his advice, I have found good results to follow such treatment. In this Hippocratic treatise I have just been quoting, I find the following: "In pains, suppurations, pungent tears, and deep ulcers of the *eyes*, hot water is most expedient; when the eyes are merely red, and free from pain, *cold* is to be preferred." The sentiments here correspond almost exactly with those I heard from Prof. Agnew's lips.

I wish to quote one of the Hippocratic thoughts upon cataplasma before closing, for it covers ground that has been, apparently, lost sight of in these later years. I have italicized the special thought to which I wish to call attention. The passage is found in Hippocrates' treatise upon "Ulcers," and reads: "When you seem to require a cataplasm, it is not the ulcer alone to which you must apply it, but *to the surrounding parts*, so that the pus may escape and the *hardened parts become soft*."

I do not wish to rake up too much "dead" literature; still I cannot help thinking that a judicious acquaintance with these old authors will add much to modern Æsculapian enlightenment.

SULPHATE OF CINCHONIDIA.

By EDMUND ANDREWS, M.D.,

PROFESSOR OF SURGERY IN CHICAGO MEDICAL COLLEGE, ETC.

This is one of the neglected products of Peruvian bark, which is, apparently, worthy of a much more extensive use than it has hitherto had, especially as it is nearly equal to quinine in efficiency, is less disposed to disturb the brain, and is far cheaper.

The following facts and statements are of interest in this connection. My own experience with it is not large, because a surgical practice affords few opportunities to test it as an antiperiodic; but the results of observations made by others have fallen into my hands in such a manner as to seem worthy of decided attention.

Case First was attacked with a headache, which, by previous experience was expected to last one or two days. Nine grains of sulphate of cinchonidia, taken at one dose, stopped the pain in half an hour, as a similar dose of quinine had occasionally done before in the same patient.

Case Second was a lady, laboring under a slow debility from various causes, and who had been in the habit of using preparations of quinine, etc., as a tonic. This lady was very sensitive to such remedies, and readily recognized their impression upon her. She stated that the cinchonidia acted on her exactly like quinine, except that it produced no unpleasant sensation in the head.

Case Third was a neuralgia, which yielded to a large dose of cinchonidia, very much as it probably would have done to quinine.

Prof. Lester Curtiss, of Chicago, gives me the following observations: "I have prescribed it in dispensary practice, in malarial troubles of children, in about the usual doses that I have been accustomed to use of quinine, with the result, usually, of interrupting the symptoms. The cases in which I have employed it, however, were mild attacks. I have found it of use also, in one or two instances, in mitigating the symptoms of hectic occurring in consumption.

"I have tried the drug on myself also. Feeling the premonitory symptoms of intermittent, I began taking the cinchonidia in indefinite quantities, and at irregular intervals. I probably took from two to four grains two or three times a day, for a week or more, occasionally missing a day. The cinchonidia was not sufficient to prevent the attack, and last Wednesday, about nine or ten o'clock

in the evening, I had a febrile attack, without any chill preceding. The next day I took four doses of the cinchonidia, of about five grains each; the febrile attack returned the following evening, a little earlier than before. The next day I took two doses of about eight grains each, in connection with five grains of quinine; the fever returned again in the evening, with more severity than before. The next day, Friday, I took fifteen grains more with five grains of quinine, and the attack was still more severe than the day before. My measurement of the cinchonidia was approximate, but I took the trouble to go to a druggist and have him weigh out five grains, so that I could estimate the quantity more correctly, and I think that my estimate statements of quantity are tolerably correct."

Prof. D. T. Nelson, of Chicago, informed me that he had used the sulphate of cinchonidia in Mercy Hospital several times, in the treatment of intermittent fever, generally with good success. In one case, however, of intermittent, complicating Bright's disease of the kidneys, he had failed to control the intermittent with the cinchonidia, but he also found that it was only with difficulty that quinine controlled the trouble. He also stated that he found the cinchonidia less apt to affect the stomach than quinine, and that he had not met with any of the head symptoms which so commonly result from the administration of the latter drug.

Prof. Hollister, of Chicago, gave the cinchonidia a short trial during his service in Mercy Hospital, last September. He does not remember the particulars of his trial, which was not very thorough or systematic. His general impression of the results of his trial is, that it was unsatisfactory, and that the drug would only be of use in the class of cases in which salicin would have the advantage.

I find, quoted elsewhere, the following opinions of gentlemen personally known to me, viz. :

. Dr. Wm. E. Quine, Professor *Materia Medica*, etc., Chi-

cago Medical College, Chicago, April, 1875:—"So far as my experience in the use of cinchonidia has gone, it certainly justifies me in the belief that it ranks equal in power as a tonic and antiperiodic with any of the other derivations of the cinchona."

Prof. H. M. Lyman, Physician County Hospital, Chicago, Ill., May 3, 1875:—"I am now trying the sulphate of cinchonidia with much satisfaction at the County Hospital."

Dr. A. R. Bodley, Athens, Calhoun Co., Mich., November 16, 1874:—"I have given the sulphate of cinchonidia a very fair test, and pronounce it fully equal to sulphate of quinia in malarious diseases. I have used it in about forty cases of intermittent and remittent, myself among the number, and in no case have I failed to produce the desired effects. I thought when I first examined it, that its insolubility in alcohol, acids, etc., would render it objectionable, but I find it produces little or no cerebral disturbance, even when given in large doses. I am satisfied the disease is not as likely to recur after being broken, as when the sulphate of quinia is used.

"I combine about five grains of capsicum to the ounce, and I think it adds to its efficiency, as it does also with quinia."

Statements are published that extensive statistical experiments were made in India, with the various alkaloids of cinchona, which showed that cinchonidia seldom failed to arrest intermittents, ranking, in that respect, so close to quinia as to be practically equal.

Owing to my own practice being purely surgical, I only see intermittents when they occur as a complication in surgical cases, hence I am unable to present any statistics of my own, but the conclusion impressed on my mind is, that cinchonidia is an extremely valuable agent, and that given in little larger doses than quinine, it is nearly or quite equal to the latter, with the advantage of producing less disturbance in the head.

EPITHELIOMA OF THE PREPUCE, AND A SINGULAR ANATOMICAL VAGARY.

BY A. L. WRIGHT, M.D., CARROLL, IOWA.

Dec. 25. Thomas Wilson; married; age, 28; occupation, shoemaker; nativity, Scotch-Irish. Has been complaining for some months, of progressive weakness, or "laziness," as he expresses it, and vomiting on rising in the morning. The matter vomited consists of a colorless fluid, evidently water and mucus; does not feel sick or nauseated before vomiting, nor does he experience pain. A drink of water before rising would prevent the vomiting. Appetite is very good, food occasions no distress. There was great thirst, especially at night; this had existed for years, ever since he was a child.

Has always passed large quantities of urine; on examination I found it of a pale straw color, a very slight deposit on cooling, absence of glucose and albumen—(did not examine the urine as I desired, for want of chemicals and apparatus). Complains of a slight itching pain at the meatus urinarius, on micturition, has to get up several times during the night to urinate. There was a muco-purulent discharge from the urethra, very fetid; it did not pass while urinating, but during the interval. Skin dry and rough; bowels have been regular; light hurts his eyes, "they are weak," as he expresses it; conjunctiva pale; there was a dark, semi-solid substance adhering to his teeth, it would collect in a short time after cleaning them, it seemed to exude from his gums; epistaxis occurs on the least exertion; tongue clean, large and flabby. He presented that peculiar cachectic appearance so characteristic of malignancy; pulse 70; full and regular; respirations, 20. Had been troubled for some time with cramps of the flexor muscles of his legs, especially at night, occasioning great distress and loss of sleep.

The treatment was calculated to build up and give tone to the system:—Fresh air, baths, a nutritious diet,

bismuth sub. nit. to allay irritability of the stomach, with R. Tinc. Ferri Mur., 3j; Quiniæ Sulphas., 3j; Strychniæ Sulphas., gr.j; Syrup Aurantii Cort., 3ij. M. S. Teaspoonful three times a day.

Dec. 31. Discharge from penis has entirely stopped; thirst not so great; cramps do not trouble him much; rests well at night.

Jan. 4. Says something broke in his penis during the night, bled freely for a few minutes; feels better this A. M. An examination reveals that the discharge comes from between the glans penis and prepuce; in attempting to retract the prepuce, which is swollen and agglutinated to the glans by a thick, pultaceous substance, he experiences great pain and faintness, so that I am compelled to desist. Direct that he syringe the part, by passing the nozzle of a syringe between the glans and fore-skin several times before my next visit.

Jan. 7th. Vomited several times last night; is very much prostrated this A. M.; am able to retract prepuce; find the glans covered with the sebaceous secretion of the glandulæ tyronii; the papillæ around the corona are enlarged; on either side of the frænum preputii, I find a small tumor about the size of a bean, on a firm, hard and inflamed base, covered with a dark, foul, ulcerating surface, discharging a muco-sanguineous fluid, very offensive, bleeding freely if the ulcerated surface is touched; the prepuce has also partaken of the disease. I considered it malignant, and advised its removal as soon as the patient's condition would admit of it. Lymphatics are not involved. I cauterized the tumor to check hæmorrhage which was considerable in the aggregate, also used disinfectants.

Jan. 8th. Hæmorrhage from his gums is more copious; his breath is very offensive; vomited this morning a dark colored fluid, resembling coffee grounds; has some pain in epigastrium when vomiting; pressure does not cause pain; pulse 70, full and regular.

Jan. 11th. Continues the same.

Jan. 12th. Patient is very much prostrated ; hæmorrhage from gums and penis is very copious ; blood does not coagulate. Applied basilicon ointment to penis, and gave the following three times a day: *R. Tinc. Ferri Mur., Acid Sulph. Aromat., aa fl. 3vj ; Syrup. Limonis, fl. ʒ iij. M.*

Jan. 13. The under surface of the prepuce is very much swollen, great difficulty in drawing it over the glans. Appetite continues good, although he frequently vomits up everything he eats ; bowels regular ; rests good at night. Milk punch to be given freely.

Jan. 14th. Hæmorrhagic tendency increasing ; slept none last night ; had considerable pain on left side, below and left of nipple ; percussion resonance normal ; discovered friction sound with inspiration on that side ; pulse, 70 ; respirations, 20 ; has vomited several times the dark coffee ground fluid, very offensive. Gave *Morphiæ Sulph., gr. ʒ*, every hour, until relieved. *Sp. Vini. Gallici, ʒ ss*, every hour.

Jan. 16th. Is unable to void his urine ; passed catheter, and drew off three pints of high colored, very offensive urine ; bowels have not moved for several days. Gave an enema. Is entirely free from pain. Did not examine his chest.

Jan. 20th. Patient is failing rapidly. Died at three P. M.

Autopsy, nineteen hours after death, revealed the following curious and rare anatomical anomaly : Lungs and pleura healthy ; the pericardium contained half a pint of serum ; there was a copious fibrinous exudate into the pericardial sac ; the heart was enlarged, the walls friable ; dangling in each auriculo-ventricular opening was a white fibrinous clot about two inches in length ; there was a fibrinous exudation adherent to the endocardium of each ventricle, none on the valves ; there was a small earthy concretion on one segment of the mitral valve ; the endocardium of the auricles was healthy in appearance.

The cardiac end of the stomach presented a dark mottled appearance, that of passive congestion; the parietes of the same were thickened; the pyloric end was normal. The walls of the duodenum were thickened somewhat; jejunum and ileum normal; ascending colon was filled with scybala; liver, spleen and pancreas presented a normal appearance; there was cystitis. Finding no kidneys in the lumbar region, I began at the bladder, thought I would trace the ureters to their termination; there was but one ureter: that entering directly into the bladder at the base, and not passing between the mucous and muscular coats before entering. It was about four inches in length, and about one-fourth of an inch in diameter; following it I found but one kidney, situated back of the rectum, and just below the promontory of the sacrum, in the mesial line. The kidney was lobular, less firm than normal, weighing but three ounces. The vessels and ureter entered on its anterior surface; there was one artery and one vein.

The pathology appended has kindly been furnished by Dr. I. N. DANFORTH, to whom I sent the kidney.

NOTE BY DR. DANFORTH.

The specimen alluded to, came safely to hand. It is manifestly more interesting from a physiological than a strictly pathological stand-point. The kidney is distinctly lobulated, like the kidneys of the foetus, and of the lower mammalia; six very distinct lobules are very easily made out. The organ is triangular in shape, and at the apex of the triangle it is quite thin. Its pelvis is immoderately large in proportion to the size of the organ, and the same remark is true of the size of the ureter and calyces. There is no "hilus," but the ureter and blood vessels find entrance and exit upon what I take to be the anterior aspect of the organ. Upon examining the artery and vein I find that they also are out of all proportion to the size of the organ, so that this little kidney must

have received nearly as much blood as both kidneys ordinarily receive. Seeing that its weight is only two ounces and a half, (in place of four and a half ounces, the average weight of the normal kidney), it is interesting to inquire why so large an amount of blood was required, and how so large an amount of urine was secreted.*

Upon laying the kidney freely open, I find that the usual abrupt division into "cortical" and "medullary" portions is wanting; there are no "pyramids" at all; the pelvis, instead of being a single well defined cavity, spreads out into several deep "cornua" or excavations, which penetrate in different directions. These channels are simply so many branches of the ureter, which together constitute the capacious pelvis, and then branch off in different directions to gather the urine directly from the secreting portion; that is, without the usual intermediary conducting apparatus—the so-called "pyramids," which are made up mainly of the "tubuli recti," whose function is simply to conduct the urine from the convoluted tubes to the cavity known as the "pelvis."

The revelations of the microscope concerning this singular kidney are very interesting. I made thin sections from all parts of the organ and have studied many of them, in different media, (glycerine, damar, and balsam), some of them stained with logwood, others with carmine, and still others with a weak aqueous solution of iodine. I notice the following points:

First. The malpighian bodies are unusually large—indeed, the largest I ever saw—and the coil of blood-vessels within them unusually complicated and dense. The afferent vessels are exceptionally large, and their longitudinal and circular fibres can be demonstrated with great perfection.

* In relation to the weight given above, I should remark that considerable allowance must be made for loss of water occasioned by immersing the specimen in alcohol for preservation; the action of alcohol being to rob the tissues of water. After soaking the kidney in water for five hours, I find that it has gained three-quarters of an ounce. I presume that three and a half ounces would be about an "honest" estimate.

Secondly. The arteries and veins ramifying in the substance of the organ are everywhere very large as compared with the size of the organ, and their structure is very easily demonstrable.

Thirdly. The tubuli uriniferi are everywhere quite large, and they are coiled in the most compact and complicated manner; indeed, they seem to be packed away with the view of storing the greatest amount of "working" material in the smallest possible space.

Fourthly. The endothelium of the convoluted tubes just alluded to is very distinct and prominent. This is especially true of a freshly cut section, dipped in dilute acetic acid, stained with a weak solution of iodine and then mounted in glycerine and examined *at once*. I have never seen the secreting structure of the human adult kidney so handsomely displayed before.

Lastly. I do not find in any single section, any of the "tubuli recti" which compose the "pyramids" of the typical kidney: the convoluted tubes seem to have poured their secretion directly into the elongated "calyces," or branches of the ureter, before spoken of, which extend into the kidney structure and supply the place of the "pyramids."

From this account it will be seen that this kidney was almost wholly composed of secreting structure and malpighian bodies. Into the smallest space the largest possible amount of secreting surface was packed. Hence the large blood vessels and the large ureter were matters of necessity. I do not think it an extravagant statement to say, that this one small kidney contained as much secreting surface as both kidneys ordinarily contain; for it must be remembered that in the typical kidney the cortical portion forms but a comparatively small part of the organ, while in the specimen now under consideration the structure was entirely of that nature. Hence it is not difficult to believe that this kidney, by "working hard" was able to perform the duties of two kidneys in a manner acceptable to the economy.

THE MICROSCOPE IN DAILY PRACTICE.

(FIRST PAPER.)

BY I. N. DANFORTH, M.D.,

LECTURER ON PATHOLOGY IN RUSH MEDICAL COLLEGE, CHICAGO.

The great problem in connection with the microscope now-a-days is, *not* how to make it more "perfect," more complicated and more costly, but how to make it more available. Our students generally look upon the microscope as a kind of "luxury," only to be indulged in after the inevitable amputating case, or the more formidable "omnibus" case, has been purchased, exhibited and adored. And yet, every physician of experience would tell the student that the little pastime of cutting off arms and legs is generally far to seek, while the microscope is constantly and practically useful. Scarcely a day goes by, that a physician in active practice could not, with great benefit, employ the microscope for purposes of diagnosis; in a vast number of cases it is essential, and in not a few it simply comes to this—no microscope, no *certain* diagnosis. A physician has no right to go blundering along through the bogs and fens of guess-work, when for a moderate outlay he can command the means necessary to reach *certainly*.

More than this, the microscope is a constant educator; it widens the boundaries of the student's knowledge; it turns his thoughts into new channels; it reveals the secrets of nature's dainty handiwork; it shows him forms of beauty that were else unseen; it tempts him to a wider range of scientific study; and by so much as it adds to his culture, and enlarges the range of his mental vision, does it increase his power and influence in the community. Nor is it intended to limit the term "student" to the young man just from the lecture room. I can point to a man of wealth and broad scientific culture, well up among the "sixties," gray-haired and spectacled, who has lately become the possessor of a fine microscope, and I have never seen a more delighted, enthusiastic or pains-taking "student" of microscopy.

Considering, then, the vast and growing importance of the microscope in practical medicine, and as a means of scientific research, I do not think I shall need to apologize to the readers of the JOURNAL AND EXAMINER, if I print therein a few brief articles concerning the instrument and its proper and profitable employment.

As a general rule, the first thing in order is the purchase of a microscope; and it is also quite true to say that as a general rule the purchaser gets cheated. The uninstructed purchaser asks at once of a given microscope, "how many diameters does it magnify?" whereas "diameters" are about the cheapest, as well as the most useless, quality in connection with a microscope. Not one in ten amateurs takes pains to inform himself in regard to the points really desirable in a good microscope; hence he is more than likely to buy the instrument that furnishes the greatest array of polished brass, the greatest number of milled-headed screws, and the most formidable tangle of complicated tackle. At all events, he is compelled to take the judgment of dealers, and dealers look at microscopes from the stand-point of profit and loss. A student once told me that his preceptor possessed a microscope which magnified *five thousand diameters* and cost *fifty dollars*! I have envied that "preceptor" ever since. If I could have my say, I would advise every one who contemplates buying a microscope, to first procure some standard work on practical microscopy, and carefully read it; it would save a multitude of blunders. The question immediately comes up, "what work is the best?" I believe the best physicians' hand-book of microscopy yet published, is that of Richardson, of Philadelphia; it is practical, concise, cheap, and, in the main, accurate and reliable. Among more elaborate and costly works, Beale's "How to Work with the Microscope," is perhaps the best; Frey's "Microscope and Microscopic Technology," next; and Carpenter's "Microscope and its Revelations," last. This, however, is a matter of opinion, and I am simply giving *my* opinion.

I am very positive, however, that the beginner can very profitably study either of these excellent authorities before buying a microscope.

What constitutes a good microscope?

1st. It should stand firmly upon a broad and somewhat heavy tripod base, and the three arms of the tripod should be sufficiently long to insure perfect steadiness, in whatever position the instrument is placed.

2d. It should be perfectly free from lateral movement or oscillation, when the focus is changed by turning either of the adjustment screws, and this should be equally true whether the instrument be vertical, inclined or horizontal.

3d. The body or tube ought always to be attached to the base by a firm joint, so that any position from vertical to horizontal can be secured. This is an exceedingly important point. Every practical microscopist knows how very tiresome it is to work with an instrument which is fixed in the vertical position like the old-fashioned Oberhauser instruments, and some of those now made in Germany.

4th. The stage should be large enough not only for the free movement of objects fixed upon glass slides, but for the attachment of stage forceps, a frog plate and an animalcule cage; a revolving diaphragm, having five or six openings, should always be fixed below the stage; the mirror should be large, should have two surfaces, plane and parabolic, and should be capable of free lateral movement, so as to enable the observer to employ oblique light when desirable. No stand is worth much which does not combine these indispensable requisites. So much for the "stand," or mechanical portion.

The optical portion of a good, serviceable microscope should include at least:

(a). A No. 1 eye piece—perhaps more generally called in this country the "A" eye piece. It is very common to have two eye pieces, Nos. 1 and 2, or the "A" and "B" eye piece, the latter possessing a higher amplifying power than the former; but I am persuaded that very

little is gained by high eye pieces. The eye piece can only magnify the magnified image, and this can only be accomplished at the expense of definition and clearness. I suppose that the diatomists find great benefit from the use of high eye pieces, but for histological purposes they are not generally useful. It is far better to put the magnifying power into the objective.

(b). Two first-class objectives should accompany every physician's microscope, namely, an inch and a quarter inch, or a fifth. (By "inch" and "quarter inch" it is merely intended to say that the former has a focal distance of one inch, and the latter a quarter of that focal distance—statements that are perhaps never *exactly* but only *approximately* true.)

By "first-class" objectives, I do not, by any means, refer to those which are the most costly. The cost of an objective depends largely upon its "angle of aperture," and the "angle of aperture" is the "angle made by two lines from opposite sides of the aperture of the object glass with the point of focus of the lens."* Now the objective makers, being incited thereto by those enthusiasts who have gone crazy on the subject of "diatomes," have themselves gone crazy on the subject of "high angles," which, as Beale remarks, are "valuable for investigations upon many very delicate and thin structures, such as the diatomaceæ; but such powers are not well adapted for ordinary work,"—that is, for histological work. Some of the "high angle" quarters and fifths, of the best makers, cost as high as forty or fifty dollars, which is simply an absurd outlay of money, unless the purchaser proposes to spend his time in the comparatively useless work of "resolving" the markings on the more difficult diatomes, or other "test" objects. I believe the most useful quarter or fifth inch objectives for histological investigation and diagnostic purposes—indeed for the general wants of the practitioner—are those whose angular aperture is not over 70 or 80 degrees, costing, in

* Beale: "How to Work with the Microscope," 4th ed., p. 7.

currency, not more than from fifteen to twenty dollars, or at most, twenty-five dollars. The inch objectives do not vary so much. There is little difficulty in procuring a good one; those made by Tolles and Wales are especially good; and I may add, that Hartnack's are of equal excellence.

(c). A condensing lens, or "bull's eye," should accompany every physician's microscope. It is all but as indispensable as an objective. It is constantly needed for the examination of objects by "reflected" light, and at the same time it furnishes, without extra cost, a large "hand magnifier," which is exceedingly useful for very many purposes.

In this brief list, I have included everything *necessary* for a really good and serviceable physician's microscope; and such a microscope every physician ought to possess and *use*, just as constantly as he does his stethoscope, his fever thermometer, or his urinometer.

In a future paper, I will endeavor to show the minimum cost of such an instrument, and also say something as to the merits of the instruments of different makers.

GLYCERIN IN THE TREATMENT OF DIABETES.—M. Garnier has addressed a note to the Académie des Sciences on the employment of glycerin in the treatment of glycosuria. M. Schutzen, of Dorpat, has shown by his researches that glycerin either alone or associated with tartaric acid, and taken in the dose of half an ounce to an ounce and a half in the course of twenty-four hours, constitutes a valuable adjuvant to the régime especially adapted to glycosuria. M. G. has himself made use of purified glycerin, and has made it more palatable by mixing it with a certain amount of alcohol and of aromatic substances (mint, anise, bitter orange.) The employment of glycerin has aided him greatly as well as other patients.—*Bull. Gén. de Thérap.*, No. 10, 1875.

Editorial.

Two journals, possessing, in a high degree, respectability and influence, have been published in this city for a number of years, under the auspices of the two Medical Colleges located here.

To a certain extent they were regarded as the organs of these institutions, and although liberal and high-toned in their character, it was difficult for the profession to consider them in any other light than partisan.

About a year since, a few medical gentlemen conceived the idea of starting another journal, which should have no bias toward any institution or party ; one in which all members of the profession could unite their energies for the advancement of medical science.

With this view, the enterprise which finally led to the union of the two existing journals under a new order of things, was inaugurated by Drs. Etheridge, Bridge and Hyde. These gentlemen, with others of their friends undertook the organization of a joint-stock company, to be entitled "The Chicago Medical Press Association," for the purpose of publishing a medical journal, and the establishment of a medical library and reading rooms for the benefit of the members of the Association.

The organization is now complete, the journals are united under the name of the *CHICAGO MEDICAL JOURNAL AND EXAMINER*, and the Medical Press Association is responsible for its editorial management.

This, we think, is sufficient guarantee for the scientific and practical character of its contents, and the purity of its ethics. It is also an assurance to the profession that the *JOURNAL AND EXAMINER* will be conducted in a spirit of true catholicity for the advancement of the science of medicine and the promotion of fraternity among physicians.

To place its success and permanency beyond question,

we have only to add, that its business management and publication are entrusted to the extensive and widely known publishing house of W. B. KEEN, COOKE & Co., of this city.

The editors invite all members of the profession to contribute original articles to the pages of the JOURNAL AND EXAMINER, and promise them, in return, that their communications will be appreciated and proper consideration bestowed upon them.

There are many men among us who possess the ability and qualifications to distinguish themselves, but whom reticence—from either diffidence or indifference—has withheld from their deserved positions. To them we appeal for aid and support in making a first-class periodical.

Our circulation for the remaining portion of the year is large, as our subscription list contains the names of all the subscribers of both the CHICAGO MEDICAL JOURNAL and the MEDICAL EXAMINER, and we confidently anticipate that it will be more extensive next year; hence, our contributors by their communications will reach a great number of intelligent and appreciative readers.

Remembering that we have received our young protege from the hands of experienced and accomplished editors—men of extensive reputation and fame—we can but feel a sense of diffidence, and a distrust in our ability to maintain for the JOURNAL AND EXAMINER that high position which its two predecessors have attained through their agency. We promise, however, an earnest and industrious effort to succeed in that arduous undertaking.

Our facilities for obtaining foreign and domestic exchanges are such as to assure us that we shall soon be in receipt of the most valuable periodicals from the medical centres of the world. From them we hope to glean all new facts and discoveries upon their first appearance.

We expect to make the excerpt department of the

JOURNAL AND EXAMINER a very interesting and profitable one.

In our own city we are perfecting arrangements by which reports from the various Hospitals and Societies of Chicago will appear upon our pages in such a way as to make them a mirror of the practice of our industrious and accomplished corps of teachers and investigators.

We are already promised correspondence from many of the great cities of this country and Europe, and before long this also will be an important department.

Finally, we very respectfully salute our senior contemporaries in journalism, and bespeak for ourselves a fraternal reception among them, and we promise, in return, every effort to deserve well from them.

The *New York Medical Record*, of August 7, 1875, erroneously announces that "the CHICAGO MEDICAL EXAMINER, heretofore published by N. S. Davis, M.D., and F. Davis, M.D., is to be consolidated with the CHICAGO MEDICAL JOURNAL. After Aug. 1st it will be known as 'THE CHICAGO MEDICAL JOURNAL AND EXAMINER,' and will be edited by Drs. J. Adams Allen and Walter Hay."

We trust that the foregoing statement, which results from a total misapprehension of facts, will not be repeated or copied in other of our Exchanges. The Chicago Medical Press Association is a stock corporation, which includes various physicians of this city who represent, it is believed, all its different medical institutions and hospitals. They have succeeded in securing possession of both the medical journals heretofore published in Chicago, and have consolidated them under the name of the "CHICAGO MEDICAL JOURNAL AND EXAMINER." It will be seen that the editors of the new monthly, whose names appear in connection with this issue, are not those announced in the *Medical Record*. The former have been appointed to their editorial duties by the Board of Directors of the Chicago Medical Press Association.

Reports of Societies.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, July 26, 1875.

(DR. OWENS, Reporter *pro tem.*)

Thomas Bevan, M.D., President, in the chair.

HISTORY OF A CASE OF IDIOPATHIC SUBACUTE NEURITIS, AFFECTING THE CRURAL, OBTURATOR AND SCIATIC NERVES.

BY HENRY M. BANNISTER, M.D.

The case described was that of a young man, 23 years old, who, after exposure to cold, suffered from violent pains in the left groin, coming on suddenly and continuing several hours. After their disappearance, tenderness and soreness, with a considerable degree of weakness, still remained in the limb, disabling him from standing at his occupation, that of a painter. This condition lasted several weeks, when a sudden, rather rough handling brought on the pain a second time, and greatly increased the weakness, rendering locomotion difficult. After several weeks of this state of things, he left his work and returned to his home at Evanston, Ill., and put himself under the care of a physician who treated him at first for sciatica. At this time, possibly owing to some feature of the treatment, he suffered an aggravation of all his symptoms. The neuralgic pains increased in frequency and violence, the reflex excitability was greatly exalted, and for several days he was unable to lie down or even straighten his leg. The symptoms as described at this time seemed to resemble those of the second stage of coxalgia, and on this diagnosis he was finally put to bed and extension applied to the limb, with the result of giving partial relief.

At the time when first seen by Dr. Jewell and myself, he had dismissed his physicians and had been under his own care solely for three weeks. His general condition was fair, but he was unable to move his left leg to any

great extent, or to lie on either side, tenderness existed over the adductor muscles, along the course of the sciatic and in the sciatic notch, and to a certain extent all around the hip joint, the tissues in that region being somewhat swollen and tense. The crural nerve seemed less tender. The patient had himself removed the extension apparatus some days before, and now both extension and compression of the joint caused pain, sometimes referred to the knee and sometimes to the groin.

The diagnosis of neuritis being made, the treatment prescribed was absolute rest for the limb, the galvanic current, small blisters around the joint, and occasional friction of some of the affected muscles. The patient's circumstances prevented any costly appliances that might have been useful, and considerably embarrassed the treatment. After three weeks of this treatment, a considerable improvement was manifest. The swelling had largely gone down, the tenderness over the sciatic and around the hip joint had disappeared to a very great extent, and power of motion had largely returned to the limb—so much so, that it seemed advisable to use mechanical means for enforcing absolute rest of the part, which was before insured by its weakness.

The case is yet under observation.

Dr. Bannister considered the case as one of idiopathic subacute neuritis, affecting the obturator, crural and sciatic nerves probably—the first certainly. It is, in many respects, a typical case of this disease; in others, it differs from what is usually described. Its interest is in the comparative rarity of the affection in its well developed form, and although not uncommon it is not an everyday disorder. It probably happens much oftener than it is recognized. Some authors place it amongst the rarest of affections of nerves, *i. e.*, in its idiopathic, non-traumatic form, like the case described, but in this, he thinks, they are in error.

Weir Mitchell's book on nerve injuries gives, perhaps, more information in regard to the subject than any other work in our language. The latter believes fully in it, as a factor in the pathology of many cases of disorder of the nerves. With the exception of papers concerning a similar affection of the optic nerve, and a few on disorders of nerves as productive of certain skin affections, the literature is quite insignificant.

In other languages the same is the case to a very great degree, but foreign text books are, many of them, fuller in their treatment of the subject—Erb, for instance, in his work on the principal nervous affections, in the 12th vol. of Ziemssen's *Encyclopædia*. The case had been variously diagnosed—hip-joint disease, neuralgia, rheumatism.

Dr. Bannister saw no reason for doubt as to the diagnosis of neuritis. The lack of sensory symptoms, and the rapid and variable character of the paralytic symptoms, are noteworthy. The variable character of the tenderness, now in one place more than another, and then again changing, but nevertheless always persisting to a greater or less degree, is worthy of mention.

Perhaps the best reason for the disproportionate ignorance of this subject, is the fact, that neuritis seldom is fatal when confined to the peripheral nerves, and the central lesions to which it gives rise, are alone noticed in the autopsy. It would require a very careful clinical history and analysis of any case to determine whether peripheral nerve changes are primary or secondary. There is considerable reason to think, that a morbid process starting in the nerves, may rapidly involve the cord and medulla, and cause death.

The case was discussed by Drs. Hyde, Merriman, Peck, and others.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, Aug. 9, 1875.

(Reported by E. WARREN SAWYER, M.D.)

The Society met at the Grand Pacific Hotel. The President, Dr. Bevan, in the chair.

Prof. Freer, the essayist of the evening, read an interesting and extended paper on the subject of transfusion, which will appear, *in extenso*, in the Transactions of the State Medical Society.

The first part of the paper was given to the history of transfusion to the present time.

Two distinct methods of transfusing are known to-day; first, the mediate. The reader exhibited the various instruments which had been used for transfusing mediately; the simple hydrocele syringe he had used more than once successfully, as had also Dr. Hunt. Especial attention was called to an ingenious apparatus suggested by Dr. F. L. Wadsworth, which consisted of a graduated Wolf bottle; in the central opening a perforated, tightly fitting cork was placed, which gave passage to a thermometer, by means of which the temperature of the blood to be used was always known. Through one lateral opening in the bottle, a tube was passed through a tightly fitting cork, one end of which was armed with a blunt-pointed canula which is to be introduced into a vein of the recipient; the other end of the tube reaches nearly to the bottom of the bottle. Through the other lateral opening in the bottle, a tube is passed through a tight cork, one end of which extends a little way into the bottle, the other end communicates with a common Davidson's syringe. The bottle is now to be partly submerged in a vessel of warm water, the temperature of which can be regulated by pouring into this vessel hot water from time to time. By working the bulb of the syringe, the atmospheric pressure within the bottle is increased, and the blood can thus be forced into the receiver's veins.

Prof. Freer gives preference, above all other instruments, to the simple pipette suggested by McDonald, of Dublin.

By the immediate method, the blood is passed directly from the veins of the donor to the veins of the receiver, through a simple tube, with no other *vis a tergo* than the cardiac impulsion of the donor. This method is confined almost entirely to Germany ; in fact, the alarming symptoms which it causes, precludes its use in any other country.

A kind of bogus immediate method of transfusion had been conceived by Aveling, whose instrument is a valveless Davidson's syringe, which is placed in communication with the vein of the donor and receiver. By working the bulb of the instrument, and pinching the rubber tube alternately on the proximal and distal side of the bulb, the blood is aspirated from the vein of one and forced into the other's vein ; the bulb being a substitute of the ventricle of the blood donor.

This is the most dangerous of all modes of transfusion, for it is almost impossible to avoid the coagulation of the blood, and the escape of small clots into the vessels of the receiver.

The virtues of these two methods, of mediate and immediate transfusion, are not comparable. In the one, blood must be used which will coagulate, under some circumstances, despite the greatest rapidity of operation and the utmost circumspection. In the other, blood is used which cannot coagulate ; thus allowing the operator to enjoy the freest leisure at the same time that he entertains no fear that the person will be destroyed by the operation. In fact, "*you cannot injure your patient, if you would,*" by using the defibrinated blood.

The reader preferred a whisk of broom corn, made clean by boiling, to all other means of whipping and defibrinating the blood.

Human blood should be used in human transfusion, for recent experiments in animal transfusion have shown

that the blood serum of one species is inimical to the blood corpuscles of another species.

The physiological import of the operation is worthy of the most extended consideration. Prof. Freer reiterated his convictions that there is nothing mysterious connected with the effect of transfusion, as there is in the action of a drug; it should be regarded as a means of nutrition, simply, in which a food is supplied in a form most perfectly digested and prepared, and ready to be assimilated by the various tissues. He is satisfied that fibrine is not essential to the constitution of this perfect food, and further, because its presence adds greatly to the real danger in the operation, it not only *can* be removed without detracting from the virtue of the food, but it *should* be removed in order that the risks of the operation may be averted.

The great reason why so little has been realized from transfusion, is because the nutritive end of the operation is not considered; and because the supplying of this pabulum is not repeated, or, if repeated, an interval is observed, during which the patient dies from inanition.

Prof. Freer alluded to a series of experiments which he had performed,* which showed that defibrinated blood could be kept for a long time without destroying its vitality.

Many instances of transfusion were spoken of which had been performed in this country and abroad. The paper was quite generally discussed by the gentlemen present.

Dr. Bartlett addressed the Society on the subject of determining the amount of urea contained in urine by Apjohn's method. His subject was fully illustrated with chemical apparatus, and by the examination of a specimen of urine. The speaker called attention to the importance of reading the index after the tube had been made to communicate with the retort, and the disparity between the level of the fluid in the containing tube and the inner

* CHICAGO MEDICAL JOURNAL, 1875, No. 7, page 518.

tube be noted, before the urine is mixed with the test solution. This disparity is to be subtracted from the index after the generation of nitrogen has ceased.

Two ingenious and valuable details in this mode of analysis have been suggested by Mr. N. Gray Bartlett. First, the submerging of the retort in a jar of water, to cool the contents of the retort after the generation of the nitrogen. Second, the pouring of the urine into the retort, and having the test solution in the bottle, which is to be mixed with the urine, instead of the reverse order; with this advantage, viz., the test solution may be measured out in little charges which can be kept on hand by the analyst.

Dr. Sawyer reported the case of a gentleman who was the victim of periodical blood-losing by venesection.

Dr. Bartlett exhibited a modification of Neugebauer's speculum, which possessed the advantages over the original, in that it could be used without moving the patient from the middle of the bed, and without an assistant to hold the handles.

POISONING BY STRAWBERRIES.—Dr. Garnier relates a case of fatal poisoning by strawberries (in the *Lyon Médical* for June 20th), occurring in a strong, healthy girl, 15 years of age. Three hours after eating a cup of berries, "he found her in a dying state, comatose, with complete prostration, livid countenance, and a very small, intermitting pulse." All remedial measures signally failed. The writer has seen several similar cases, and has saved four by emetics, but he has lost more than he has saved. Enormous meteorism is speedily produced, and in consequence thereof, in Dr. G.'s opinion, after two hours, emetics are of no avail; instead of emetics, then, ammonia should be given.

Hospitals.

COOK COUNTY HOSPITAL.

Case of Pyonephrosis— (From Notes by D. A. K. STEELE, M.D.)

Thos. M., aged 18 ; laborer ; Bohemian by birth. Was admitted to wards of the County Hospital, June 20, 1874, suffering from obscure renal difficulty. As he spoke English very imperfectly, the previous history of the case was very meagre, and with much difficulty the following history was elicited :

He had not been feeling well for three months ; had some difficulty in urinating ; complained of occasional pains in the regions of the kidneys, also of cramping pains in the legs. For the past nine days says he has been much worse ; pains aggravated ; has had occasional rigors ; breath short and labored ; suffered from occasional convulsions. On admission, patient fairly nourished ; skin hot ; pulse, 120° ; temp., 100° ; resp., 36 ; tongue somewhat furred ; face dusky and anxious.

Physical examination reveals lung sounds normal ; a soft, blowing murmur at base of heart with first sound ; abdomen seems tender on palpation, especially at the sides ; has some diarrhoea ; makes water frequently, but passes only a small quantity of high-colored urine, which contains a considerable sediment, has a sp. gr. 10.10, contains pus and a large percentage of albumen. Patient was put upon 20 gtt. doses of digitalis and 5 grs. pot. iodid. ter die, and sufficient morphia to allay pain ; to have light, nutritious diet.

June 24th. Patient continued nearly in the same condition, respiration becoming more labored, pyrexia more marked ; occasionally the patient becomes somewhat delirious.

25th. Patient more delirious ; attempted to escape from the hospital last night, and was with difficulty overcome and brought back.

2 P. M. Patient rapidly growing worse; breathing more labored; expression of the face more anxious; eyes wild in expression, pupils dilated; has occasional tetanic convulsions. Died at 2.45 P. M., after a very severe convulsion. Autopsy, eighteen hours after death.

On examination of the brain, found membranes apparently normal; pia mater was partially covered with cloudy serum; found considerable serous effusion about base of brain; brain substance slightly congested, the puncta being very prominent. On opening thorax, found left lung healthy, the right bound down at the apex by old pleuritic adhesions, does not contain any tubercles; heart, normal; liver somewhat congested. On removing the left kidney found it enlarged and lobulated, fluctuating freely, being filled with pus which had so completely distended the pelvis that the glandular structure of the organ was entirely disorganized, leaving only a large membranous sac which was subdivided into several compartments, giving it a multilocular appearance, there being free communication between all portions. Also, found five calculi occupying the position of the calyces, principally occupying the portion around the opening of the ureter, the largest calculus weighing $27\frac{1}{2}$ grains; the ureter was somewhat dilated.

The right kidney was similarly enlarged, and full of pus and urine mixed. Its substance was not so completely disorganized as the left. It also contained four or five calculi, the largest weighing 18 grains and perfectly occluding the opening of the ureter. The right ureter was also dilated. Found the walls of the bladder nearly twice as thick as they should be, and in a state of chronic inflammation. It contained a considerable quantity of turbid urine. Other abdominal organs were healthy. The entire weight of the calculi of both kidneys was fifty-seven grains.

Summary of Progress in the Medical Sciences.

I.—OBSTETRICS.

1. *Diagnosis and Treatment of Placenta Prævia.* CHARPENTIER. (*Archives de Tocologie.*)

(A.) Date of expectation: from seventh to eighth month, rarely the sixth. *Sudden* occurrence and cessation of hæmorrhage, with reappearance at uncertain intervals, and in increasing quantities, till labor supervenes. Absence of ballottement, from interposition of placental mass. Hæmorrhage always external, and continuous with uterine diastole. Expulsion during systole. (B.) Artificial delivery most dangerous, and only suitable to urgent cases. Rupture of membranes only admissible when there is partial dilatation—difficult in complete presentation. Ergot greatly increases danger to child, and is contra-indicated in cases of pelvic contraction, organic uterine disease, and mal-presentation. The author regards the plug of charpie or tow (a pound and a half of the former) as best treatment, bladder and rectum having been previously emptied.

The charpie is introduced in the form of small balls, well covered with cerate, twenty or thirty of which have a thread attached. The anterior and (especially) the posterior culs-de-sac are tightly packed, the vagina being filled till the pellets appear externally. Then a handful or more of dry charpie is applied, covered with three or four compresses, and fixed by a T bandage, the whole being left in position from twelve to twenty-four hours. If the charpie at the vulva becomes moist, the plug is imperfect, and should be reapplied.

2. *Sulphate of Quinia as an Abortifacient and Oxytocic.* CHIARI. (*Gazzetta della Cliniche*, No. 29.)

The author concludes that the disulphate is not an abortifacient, and will not certainly induce premature labor, with or without the aid of mechanical measures.

It should not be relied upon in treating slow, suspended, or irregular labor; and, when indicated by morbid symptoms during pregnancy, it should be administered, not only for relief of the latter, but to prevent abortion or premature labor. The remedy has no modifying influence upon puerperal affections of infectious or sporadic origin.

3. *Treatment of Uterine Spasm.* FRAENKEL. (*La France Medicale*, June 12, 1875.)

The author recommends a novel treatment for relief of uterine spasm during the expulsion of foetus and placenta. When the spasmodic contraction occurs, whether it affects the whole or a part only of the uterus, whether it acts upon the foetus or only the placenta, and when introduction of the hand is impossible, it is proposed to give a sub-cutaneous injection of a milligramme of the sulphate of atropine, and of fifteen milligrammes of hydro-chlorate of morphia in solution. Chloroform is then to be inhaled for five minutes. Resolution of spasm rapidly follows, and delivery is not followed by hæmorrhage.

4. *Extra-Uterine Pregnancy.* CONRAD. (*Correspondenz Blatt für Schweizer Aerzte*, No. 5.)

Three cases are reported. In the first, a primipara, an abdominal enlargement was found to be occasioned by left tubal pregnancy, accompanied by grave symptoms. The foetus formed an encysted tumor, which could be detected through the abdominal walls. An abdominal incision was made, about the middle of the fifth month, and, by that means, bones of the cranium, with other bones and diaphyses, ribs and debris of membrane, were removed. At the end of the sixth month, the resulting fistula closed, and the patient was well—a small painless tumor remaining on the left side of the uterus.

In the second case, pregnancy was complicated by the discovery of a species of mole—the foetus giving evidence of calcification. Here, also, the patient survived.

In the third case, there were symptoms of peritonitis about the third month. While the possibility of extra-uterine pregnancy was admitted, there was still some doubt as to whether a diagnosis should not be made between pelvi-peritonitis and retro-uterine hæmatocele. Rectal puncture, a few inches above the sphincter ani, gave exit to some clots, and more than an ounce of liquid blood. The patient died in collapse, eight days afterward, and, upon post-mortem examination, the bones of a three months' foetus were discovered in a sac formed of plastic lymph, to which the intestinal loops adjacent had become agglutinated.

5. *Extra-Uterine Pregnancy.* BANDL. (*Wiener Medizinische Wochenschrift*, No. 32.)

The author reports a case of a woman, 35 years of age, having two distinct abdominal tumors. The left, which was the larger, contained a living child. That upon the right side was of a doubtful nature. The uterus was empty. During the third month of pregnancy, the patient had suffered from symptoms which pointed to the passage of a foetus into the abdominal cavity. Objection was made to operative interference, and the patient died in violent pain, with great increase in bodily temperature.

Five minutes after death, Dr. Bandl removed a foetus weighing about nine pounds, which died of asphyxia after the expiration of ten minutes. The cavity in which it had rested was formed, anteriorly and posteriorly, by the abdominal parietes, covered with a dense false membrane, and by agglutinated loops of the small intestine, and the ascending and descending colon. The floor was formed of the pelvic viscera equally adherent to each other. The uterus was five inches in length, and pushed over to the left side. The tumor which had been discovered on the right side, contained the placenta. Near the latter was found the umbilical cord, surrounded by a brown and yellowish envelope, made up of retracted membranes.

II.—GYNECOLOGY.

1. *The Epithelium of the Mammary Ducts.* ROBIN, CH. (*Jour. de L'Anatomie et de la Physiol.*, No. 4.)

The galactophorous canals are not provided with a mucous lining. Their epithelium is made up of a thick layer of many-sided, almost prismatic cells, having a tolerably large and distinct nucleus. It rests upon a structureless limitary membrane, from one to two-tenths of a millimetre in thickness, whose adherent surface becomes insensibly united with the laminated tissue of the mammary structures beneath. Ordinarily, there are two rows of epithelial cells in this lining membrane, the deepest composed of nucleated epithelium (or "recently-individualized cells") only one-hundredth of a millimetre in thickness, having an oval nucleus and no nucleolus. The nucleolus is, however, to be discovered in the nucleus of the epithelium of a certain number of subjects in a healthy condition. In almost all cases of tumors of the breast (the so-called cancerous neoplasms and others), the galactophorous canals which are not destroyed, exhibit a distinctly marked pavement epithelium, composed of fine cells from two to three times larger than those ordinarily described, more or less covered with fatty granulations, and exhibiting a distinct oval nucleolated nucleus, larger than in the normal condition.

2. *The Development of the Ovary.* DE SINETY. (*Le Progres Medical*, June 19, 1875.)

After the third month of intra-uterine life, two species of cells can be discovered in the ovary. Some are quite small, others are larger. Those having a large nucleus are primordial ovules. They are disposed in an irregular order, and form minute masses, separated from the connective tissue by delicate layers. At this time—as at the moment of birth—the proper ovary is merely represented by that which eventually becomes the cortical substance.

The medullary substance is represented merely by em-

bryonic connective tissue, in the form of a small pedicle, and the vessels which are supplied to the ovary. At the fifth month, primordial follicles can already be discovered, made up of a layer of connective tissue and a circlet of small cells about the ovule. At the seventh month, the primordial follicles become more numerous, and the so-called "canals of Pflüger" appear, which are changed into follicles by a species of strangulation.

But about the ninth month, and during the few weeks succeeding birth, these canals anastomose, communicate with the epithelium of the ovarian surface, and contain the cells which characterize that epithelium. In the ovaries of the newly born, Graafian follicles are almost always visible to the naked eye, contrary to the generally received opinion on this point.

In the few days which succeed birth, follicles may often be discovered, as well developed as in the adult female, and constituting true cystic ovaries, in which are to be seen ovules whose origin is indubitable. This fact is probably intimately connected with certain mammary phenomena, noticeable at the same age. Observations upon the testicle, at this period, would undoubtedly prove interesting, as tending to throw light upon the puberal changes in both sexes.

In the cystic ovaries of infants, there are often cicatrices and follicles in different stages of atrophy—a circumstance which points to the possible resorption of follicles, in spite of the considerable development which they have attained. These cicatrices are important when considered with reference to the ulterior development of the ovary. During the process of their organization, the vascular and connective ovarian tissues penetrate deeply beneath; and thus the medullary substance is formed, which pushes more and more to the periphery the ovule-bearing cortical layer.

At the fifth year, the medullary and cortical portions are equally represented in the substance of the ovary, while in the adult the cortical portion does not represent

more than a quarter of the entire organ. At any period of life, the Graafian follicles which are most developed are always found in close proximity to the vascular portion. Perhaps the activity they display is due to the excess of nutriment which they thus receive.

3. *Ovariectomy Complicating Pregnancy.* HILLAS, THOS., M.R.C.S. (*Australian Med. Jour.*, Feb., 1875.)

June 13, a single woman, 24 years of age, was placed under chloroform, and an incision made midway between the umbilicus and pubis, in commencing ovariectomy. When a small wound was inflicted upon the peritoneum, a large jet of venous blood escaped, and was controlled by pressure. The operator was convinced that he had wounded a gravid uterus, and extended his incision to the umbilicus, when a large uterus rolled out upon the thighs, and the ovarian sac protruded. Eleven quarts of fluid were drawn off by tapping; there was no hæmorrhage, and but few adhesions. The sac contained a dozen small cysts. The short and thick pedicle was finally tied firmly with double whip-cord ligature. Afterward, the clamp was applied, the pedicle divided, and the ends of the double ligature tied over the clamp. The uterus was then incised to five inches, and the placenta, with a well-developed eight-months foetus, extracted—the latter living. The uterine wound was closed with silver wire sutures, when the organ properly contracted. In six weeks the cure was complete. She has since menstruated regularly.

III. CUTANEOUS AND SYPHILITIC DISEASES.

1. *Visceral Syphilis.* COFFER. (*Le Prog. Medical*, June 19.)

A woman, 32 years of age, died at the Lariboisiere, having exhibited ulcers of tubercular syphilis upon the legs, osteo-periostitis of one malleolus, hæmatemesis, double hydrothorax, anasarca and hepatic enlargement.

At the autopsy, the two inferior lobes of the lungs were found affected with interstitial pneumonia, and, at one

point, there was considerable thickening of the connective tissue, with bronchial dilatation. The liver was voluminous and completely deformed by retraction of a largely-developed connective tissue. Its surface was deeply furrowed and covered by projections and broad fibrinous bands. On section, a white resisting fibrous mass was found, penetrating deeply into the hepatic tissue, having in its centre, small spherical, yellowish, indurated masses of a caseous appearance, each as large as a pea.

The microscope indicated that the newly developed connective tissue, not only surrounded the lobules but *penetrated into their interior*. Amyloid and fatty degeneration of the hepatic cells coexisted.

The case was regarded as one of visceral syphilis, with production of gummata in the lungs and liver. In the discussion upon this case, M. Després, of the Academy of Medicine, objected to the diagnosis, since the history of antecedent syphilis was wanting. It was not clear to him that the ulcerations upon the leg were syphilitic and with the naked eye he could detect merely the evidences of hepatic cirrhosis.

2. *Anal Eczema*. VÉRITÉ. (*La France Médicale*, June 26, and July 3.)

In this affection vesicles are rarely observed on account of the early resorption of their contents and their change into papules. When ruptured, the concretion of their contents produces delicate yellow or greyish scabs.

There is generally a red or rosy surface about the anal orifice, covered with lichenoid papules, having a scratched summit. According to the state of the sweat glands, more or less numerous and fine crusts are to be seen. The cutaneous folds in the neighborhood of the anus, may be œdematous, fissured, or exhibit ulcers extending as far as the derma. The perineum, scrotum, sacral region, vulva, and internal surface of the thighs, may be invaded.

The moisture is due to glandular secretion—not to eczematous discharge. Anal eczema is a dry eczema in

a humid locality. According to Bazin it is preceded by pruritus, and its excessive duration is due to the presence of sweat and fecal matter.

For relief of the pruritus, patients will press aside the nates to get at the mucous surface; and not only rub and scratch it, but introduce two or three fingers into the rectum for several minutes, thus producing a titillation of the mucous surface which is followed by a slight serous discharge, succeeded by relief and sleep. This habit, difficult of renunciation, is dangerous in proportion as it is accompanied by pollution.

The consequent changes are analogous to those described in legal medicine as characteristic of passive pederasty: an infundibulum is formed—fissures and crests ensue; the semi-spherical concave is transformed into a plane which extends from one ischiatic projection to another—all of traumatic origin.

In women there is often vulvar pruritus, erythema of the labia majora and epithelial desquamation of the cervix. In both sexes there may be hæmorrhoidal complications. When the venous circulation is interrupted, there is infiltration and thickening, excessive pigmentation, even to the production of a bluish tint, irregular reproduction of the epidermis, and dermatitis, but no eczema proper, since the serosity escapes from the hyperemic corium.

The treatment should consist of alkalies internally, with topical application of ferric sulphate. Hardy recommends glycerine in which is dissolved a small quantity of the nitrate of mercury, when the pruritus is excessive. Other preparations recommended are corrosive sublimate, white precipitate, and solutions of potassium bromide.

The presence of worms is a frequent exciting cause of this disease, and calls for vermifuges, which, however, do not always relieve the eczema. The hypochondriasis and singular conceptions of some patients respecting this malady, are to be considered in the prognosis. Spontaneous cure occasionally occurs. Cancerous degeneration of the rectum rarely complicates these cases.

3. *The Nervous System and Skin Diseases.* BULKLEY. (*Archives of Electrol. and Neurol.*, May, 1875.)

There are two important causes of skin diseases: 1, Reflex nerve irritation; 2, Direct nerve irritation. The first is shown *inversely* in the occurrence of intestinal ulceration attending extensive cutaneous burns: *directly*, in hot, pale, perspiring, or flushing surfaces, where these changes are induced by ingesta and mental or nervous states, *e.g.*, pruritus and urticaria, also herpes gestationis, which is relieved by emptying the uterus. The second cause produces such lesions as those of zoster, leprosy and syphilis; and it is effective in patients troubled with gout, mal-assimilation, oxaluria, lithæmia, etc. To this class belong the rashes produced *some time after* ingestion of fruits, fish and the rash-producing medicaments.

Tar and buckwheat will produce acne; but so will an ulcerated uterus—the former, possibly, by distributing an irritating substance through the vascular system, the latter by reflection of irritation to the skin. If inflammation of spinal ganglia will produce the bullæ of zoster, excessive heat or cantharides externally, as well as the iodide of potassium internally, can produce similar effects. As to pemphigus, it may be syphilitic; may it not be in some instances a neurosis?

In lithæmia and icterus, the circulation of effete products produces pruritus—but so may flea-bites, the canaliculus of the acarus, the impregnated or diseased uterus, the ascaris in the rectum. Lepa anæsthesia is, more incontestibly than all others, a nervous disease of the skin, but its phenomena are often those of syphilis, and the lesions of the latter disease may be ultimately occasioned by alterations in the structure or function of nerves. Until more is known respecting the pathological changes in nerves and ganglia supplying diseased skin, we are hardly prepared to isolate a few cutaneous disorders, with more obvious nerve-phenomena, and call them neuroses.

IV. SURGERY, OPHTHALMOLOGY AND OTOTOLOGY.

1. *Amputation through joints.*

In amputations through joints for accidents, Dr. Geo. Macleod (*Glasgow Med. Journal*, Oct., 1874,) obtained very good results by not interfering with the cartilage or bone, provided they are perfectly sound. He strongly advocates this practice, for these advantages: Exarticulation is quicker, easier, requires simpler instruments, and is attended with far less bleeding than amputation in the continuity. The risks of septicæmia and osteomyelitis are reduced to the lowest attainable point, as the bone remains intact; less shock, less retraction of the muscles, less danger of injury to the flaps and nerves by the action of the unsawn bone; the power of sustaining the pressure of an artificial limb is earlier acquired and the point of support is broader and better fitted than when the bone has been divided.—*Braithwaite's Retrospect*, July, 1875.

2. *Nævi successfully treated with Electrolysis.*

J. B. Knott (St. Mary's Hospital, London) thinks this by far the best treatment, and gives a report of forty cases to corroborate his claims. He attaches* one or more needles to the negative and one needle to the positive pole of a continuous battery; they are passed into the nævus, and a short while afterwards bubbles of gas will be seen passing by the side of the needles, which indicates that decomposition begins to take place. The tumor turns into a firm clot of a bluish white color, and in this clot fibrous degeneration takes place. The number of sittings varies with the size of the nævus.—*London Lancet*, March, 1875.

3. *Scarless Eradication of Nævi.*

This is accomplished by a slow subcutaneous strangulation and ecrasing; and Richard Barwell (Charing-Cross Hospital, London) does it this way: He encloses subcutaneously the base of the tumor in a wire loop, both

* According to the size of the tumor.

ends of which emerge at the same opening in the skin. An oval rubber plate, about three-quarters of an inch long and one-eighth of an inch thick, has two holes bored obliquely through its thickness, and on its upper surface two little studs near the holes. The wire ends made to cross are passed through the holes in the rubber disk and drawn upon until the nævus is rather tense; then each end is twisted round a stud. When, on the third or fourth day, the wire becomes loosened, it is drawn tight again, and this process is repeated until the wire comes away. Thus the subcutaneous part of the nævus is destroyed and the cutaneous parts at once will shrivel and lose their morbid color. This change is hastened by the aid of strong nitric acid which is brushed over the colored parts, left for a few seconds and then washed off with an alkaline solution. —*London Lancet*, July, 1875.

4. *Varicose Veins.*

John Marshall (University College Hospital, London) removed nine inches of a badly varicose internal saphenous vein below the knee. He marked the course of the tortuous vein with ink. Esmarch's elastic bandage was then applied, and an incision was made through the skin from the upper to the lower end of the ink mark. The vein thus exposed was ligated at both ends and entirely removed with forceps and scissors. The operation was performed under the carbolized spray, and Lister's antiseptic method of dressing strictly employed. Patient was discharged from the hospital seven weeks after the operation. —*Braithwaite's Retrospect*, July, 1875.

5. *Treatment of Erysipelas by Hypodermic Injections of Carbolic Acid.*

Eugene Bockel gives (*Gazette Médicale de Strassbourg*) an account of a series of cases treated by the above method which, as far as we know, first was suggested by Prof. Hueter. Using an ordinary hypodermic syringe he makes in the circumference of the erysipelatous sur-

face five to six injections, a syringe-full each. These injections are repeated every morning and evening until the erysipelas is arrested in its progress. Sometimes this is accomplished by one series of injections; generally, however, it takes three to four days.—*Memorabilien*, June, 1875.

V. PRACTICAL MEDICINE AND PATHOLOGY.

1. *Respiratory Percussion.*

Prof. DaCosta writes an article for the *Amer. Jour. of Med. Science* (July, 1875), under the above caption. Respiratory percussion is percussion with the patient holding his breath in full inspiration, or forced expiration. Under both of these conditions, the percussion note is found to differ from that elicited while the patient is breathing easily—that with full inspiration differing most, and this difference being most available in diagnosis. At the apices and infraclavicular region, a held inspiration makes the sound (in a healthy person) more resonant, fuller, and *the pitch higher*; and where the left side has normally a higher pitch, this disparity is preserved. This statement holds good, in a greater or less degree, with the whole chest, although below the region mentioned it makes the normal disparity between the two sides less apparent.

A full and forced expiration lessens the resonance, and lowers the pitch over the entire lung on both sides—this being more clearly made out at the upper part of the chest anteriorly.

The increased resonance with raised pitch, he suggests may be explained by the fact of the altered tension of the structures in respiratory percussion.

Prof. D. has found this method of great value in diagnosis:

In *bronchitis*, where the secretions are very abundant, the breath sounds are often impaired, and the percussion note as well. The chest, struck while in full inspiration, gives exactly a normal sound. If, however, the disease

has attacked the finer structures, and solidification is beginning, this manœuvre does not render the note fuller and more resonant. If the lung is merely collapsed, this method often gives an almost normal sound.

In acute lobar pneumonia, while nothing is learned during perfect hepatization, as resolution begins, the note heard on forced inspiration is more resonant and pulmonary.

Where, in a case of slight solidification, there is doubt whether it be caused by local congestion or tubercles, respiratory percussion solves the question—the case of local congestion becoming normally resonant, that of tubercles not.

In *pleurisy*, “over the seat of plastic exudation of ordinary extent,” “forced inspiration diminishes the slight dulness that exists.” Over the seat of marked effusion, no change is effected in the percussion note. In instances of pleuritic effusion, where there is blowing respiration at the back of the lung, and “the question arises whether or not pneumonia co-exists,” respiratory percussion (inspiration) answers that question for us. Over the lower part of the chest, the note is unchanged; so is it if the dulness be due to pulmonic solidification from inflammation; but if it be due to condensation of lung tissue from compression, “decided clearness takes the place of dulness.” In cases of tubercular deposit, at the early time when prolonged expiration just begins to be heard, and ordinary percussion detects little or no change, respiratory percussion makes the change more marked, and in this way: it develops a dulness previously not existing, or it makes the resonance of the damaged lung only slightly greater, and raises the pitch, “but does not bring out the changes strikingly, as in the healthy lung.”

When ordinary percussion shows marked dulness, that on forced inspiration may show but little change, “except a slight rise in pitch, or the pulmonary resonance may be partly restored,” and that in portions of

lung still expansible and capable of function. Should in a given case this method fail, at a later examination, to show this restoration of resonance, or reveal it less than at a former exploration, it would be proof that real solidification had progressed.

Finally, in pulmonary emphysema, Prof. D. believes his discovery is infallible as a diagnostic indication. "In marked emphysema, the excessively clear or vesiculo-tympanitic note is unchanged by percussion during the act of breathing; when the emphysema is not so great, it is slightly changed."

2. *The Natural History of Acute Dysentery.* (Amer. Jour. Med. Science, July, 1875.)

Prof. Austin Flint reports ten cases of this disease in which medical treatment was omitted, for the purpose of studying the natural history of the affection. The cases were all of the sporadic variety, were hospital patients, and were carefully selected with a view to illustrating the whole course of the affection, with a diagnosis that was positive, and without medication, except *placeboic*. None of the ten cases ended fatally. The duration from the beginning of diarrhoea to convalescence varied from six to twenty-one days. The mean duration was eleven and one-fifth days. The results prove, as Prof. F. believes, that sporadic dysentery, "in a temperate climate, tends intrinsically to recover," and "that this disease has a self-limited duration." In 1853, Prof. Flint analyzed forty-nine cases of dysentery under treatment. Among these were thirteen hospital cases. The mean duration, in these thirteen cases, was just thirteen days. The mean duration of all that recovered (thirty) of the forty-nine cases, including, of course, those in private practice, was nine and five-sixth days.

Of the ten cases here reported, none of the patients had previously had dysentery, and in all the disease finished its course without any important complication, and it was not followed in any case by the chronic affection.

3. *On the Pathology and Treatment of Cholera.*

Surgeon A. R. Hall contributes to *The Practitioner* of July, 1875, a paper on this subject, which includes a paper, or the substance of it, read by him before the Royal Medical and Chirurgical Society in 1873. Surgeon Hall was for eleven years stationed in Bengal and had extensive observation of cholera, beside being at one time himself the subject of it. He strongly believes the true state of the sympathetic nerve in cholera is one of irritation and not of paralysis; that the morbid influence exercises a stimulating action on the vaso-motor nerves. Resulting from this there is increased heart's action, contraction of arterial walls, and at first augmented blood-pressure. At first the pulse is hard; afterward it becomes small from the small amount of blood in the artery. The copious limpid urine early is related to high arterial pressure; the total suppression later is due to cramp-like spasm of the renal arterioles.

The irritability of the sympathetic, through vaso-motor action, produces spasm of the walls of all the arteries. "The heart contracts forcibly but cannot dilate normally" on account of spasm—the inhibitory action of the vagus is defective. Post mortem—the right heart is gorged with blood, due to spasms of pulmonary arterioles; the left heart is empty from the same cause. The systemic veins are gorged with blood from arterial spasm. He suggests the cramps may be due to the cutting off of the blood supply by the contracted arterioles. The packed and drawn-back condition of the intestines is due to contraction of all their muscular fibres. The urinary bladder is found contracted to the "size of a walnut." Abortions occur in pregnant women attacked by cholera, the fœtus being born alive, which proves the accident to be due to spasmodic contraction of muscular fibres and not to death of the child. Everything points to extensive contraction of involuntary muscle. Logically, then, the best treatment is such as will counteract this condition.

“The hypodermic injection of pure sedatives” seems to accomplish this purpose. Chloral hydrate, by this mode of administration, is the best treatment for cholera collapse. Twenty cases are reported treated by this method, with only two deaths. The cases all occurred in India. A solution of chloral was made of 10 grs. to 100 minims of water, and 10 to 40 minims injected at a time—the intervals between doses being from half an hour to several hours, as the conditions seemed to demand. Within half an hour after the first injection the patients—in the most extreme state of collapse—uniformly expressed themselves as feeling “more life.”

4. *Incarceration of Jejunum and Intussusception.*

In the *Med. and Surg. Reporter*, July 10, 1875, Dr. A. R. Kilpatrick, of Texas, records a case of incarceration of jejunum and two cases of intussusception. The first was in a negro woman of 40, very fat, who had at her confinement, four months before, received some internal injury, as was thought, which was followed by fever and severe pain in the region of the umbilicus. She frequently thereafter felt pain in this region, and on exposure to dampness, and probable cold-catching, she had here violent pain and a considerable swelling. She soon had symptoms of peritonitis and enteritis; all cathartics failed to act, and stercoraceous vomiting came on. She died in four days. Post mortem, it was found that about four inches of jejunum had become incarcerated between two bridles made by adhesion of the omentum to the mural peritoneum, and about two inches apart. By absorption of fat, a pocket had been formed in the very thick abdominal wall for the incarcerated intestine, so that the latter approached to within a fourth of an inch of the cutaneous surface. This explained the prominent tumor near the surface, and suggested that probably the adhesions occurred at the time of confinement referred to.

The cases of intussusception, curiously, occurred in a mother and child at the same time. They were negroes, and, respectively, 36 and 13 years old. Both were attacked with fever, went to bed and were given rhubarb and "other things." Both purged violently, had pain with the purging, and finally vomiting came on, which continued in spite of all attempts to arrest it. Both died at the end of three or four days.

Post mortem, in the woman, the small intestines were found invaginated in seven different places, "the extent of each place varying from three to fourteen inches. Some had evidently been but recently ensnared, while others were gangrenous." In the boy, the small intestine was found invaginated in five places and to various lengths. There was much inflammatory exudation. The patients, it was afterwards learned, were unusually susceptible to the influence of rhubarb; a very small portion of the drug purging them severely.

[In view of the very similar predispositions these patients (the last two) must, from their consanguinity, have had; of the apparent full action of the purgative and of their great susceptibility to the effects of the particular drug; of the statement that the vomiting only came on "finally," meaning probably some time after the purgative, and remembering the belief now held by eminent physicians that invagination in healthy people is not unusual, always correcting itself, the query seems natural whether, in the cases here reported, the invaginations were not produced by the purgative, and prevented from self-adjustment by some inflammation the medicine may have lighted up.—Eds.]

VI. THERAPEUTICS.

1. *Therapeutics of Triemus Nascentium.*

The exhibition of remedies in any disease is almost wholly controlled by our knowledge of the pathological character of that disease. In no malady has there been

a greater amount of dispute about its pathology than in tetanus nascentium. In 1848, Dr. Marion Sims, then living in Montgomery, Ala., promulgated a theory of the pathology of trismus, which at that time produced a profound impression upon the profession in the United States and Europe. He contended that the cause of this morbid condition was "*centric*," owing to pressure on the medulla, by the occipital bone being depressed, in the process of parturition. This theory seemed so correct that it captivated many practitioners at first. Many a case was treated successfully immediately thereafter in accordance with this pathological idea, by what may be called, the *postural* treatment. But very many other cases were not successfully treated by this means, and thereby many were led to believe that Dr. Sims' ideas were not correct. This want of credence has so gained ground that, at the present day, a few books on the diseases of children mention this theory, under the head "Pathology of Trismus Nascentium," as one of the very many useless theories advanced to explain the cause of this malady. Dr. Sims' article is remembered by most of the senior members of the profession of to-day, but his treatment is seldom resorted to at present. The successful management of a case of tetanus infans, at present, is regarded as a most happy issue from an almost invariably—so considered—fatal disease. Warm baths, ice to the spine, hot water to the spine, blisters, mustard, narcotics, anæsthetics, amyl, and a host of other remedies, have been recommended and used with varying results; so varying, that to this day no one course of treatment may be said to be *successful*.

In the June number of the *American Journal of Medical Sciences*, is an article on the treatment of this distressing affection, from the pen of Philip A. Wilhite, of Anderson C. H., S. C., advocating Dr. Sims' pathology and treatment.

The writer resorts to the *postural* treatment. Babies, in trismus are almost invariably found lying on the back

—a position favoring the condition of depressed occipital bone. The usual concomitants are present in all degrees of intensity, from *mild trismus*—“*trismoid*” as Dr. Sims calls it—to the terribly destructive form, which kills the infant in one hour. The writer enumerates a number of cases in which he used postural treatment with charming success. The postural treatment consists in placing the infant on its side. In this position the pressure is removed from the brain *at once* in most cases, and amelioration is marvelous. The little patient usually sinks into a quiet slumber, and when awakened it takes the breast promptly and without any hesitancy, showing that the condition of locked jaw is removed. One case is here quoted from: A woman had triplets; two had died of trismus within a few hours of each other. The third was writhing in the *last* agonies, as the friends supposed, of this malady, when the doctor, casually passing the house, stepped in and was shocked to find two dead babies in the coffin, laid aside, awaiting the death of the third baby, so that all three could be interred together. “Notwithstanding the fact that the child seemed almost moribund, I stated to the parents and friends that I wished to try the experiment of the lateral decubitus. They at first objected to my doing anything at all, saying the child must die as the others had, and that it would soon be out of its misery. Mrs. R.—the mother—said it had not been able to swallow for the last fifteen hours, and what was the use of worrying a dying child? However, I carried my point and had the child laid lengthwise on a soft pillow on its side, and turned from side to side every fifteen minutes. From the moment it was laid on the side, a decided change was seen in all its symptoms, and in less than an hour and a half from the time the lateral decubitus was instituted, all spasm ceased, the jaws were unlocked and the child sucked freely and swallowed well. I gave it no medicine, but simply directed that lateral position should be kept up for some time, being careful to change it from

side to side every hour or so. * * * * It recovered rapidly and I saw it no more till it was eight months old ; and there was not a finer child in the country, of its age."

Examination of the two dead babies revealed "the occiput, in each, depressed to an unusual degree."

The pathology of this malady suggests the treatment, viz., removal of pressure by the occiput. To accomplish this, placing the infant on one side and then on the other, alternately, changing its position every fifteen or thirty minutes, will generally suffice, as will be evidenced by a diminution or a cessation of the convulsions. When this does not relieve the patient, surgical interference should be promptly resorted to, to elevate the bone.

Translations.

HERMAPHRODISM,

FROM A MEDICO-LEGAL POINT OF VIEW.

Translated from the French of Basile Poppesco,

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INTRODUCTION.

The vices of conformation of the genital organs had from all time attracted the notice of observers ; but the absence of positive notions of the normal anatomy and pathology, to the middle of the eighteenth century, had permitted the ranging of these facts, which were much more in the domain of the marvellous and unknown, in a special category, rather than in the true domain of science.

It was only at the end of the last century, and the beginning of this, that numerous works appeared which partly elucidated the subject and enabled us to penetrate the

infinite modifications of its mechanism. However, it was necessary to wait for the recent discoveries of modern anatomy, and the labors in embryology, in order to affirm that the question of hermaphroditism was nearly solved.

The medico-legal questions, which are attached to this arrest of development, can be treated now with an indisputable competence, before the tribunals, because the medical jurist has as a base for his argumentation, and foundation for his declarations, the entire group of phenomena amassed from embryology and experimentation.

Prof. Tardieu, in his lectures, and in his works, is one of those who have contributed most to elucidate this subject, and to show all its practical bearings from a medico-legal point of view. We have thought that, in the present state of science, a summary of the principal questions which belong to hermaphroditism would not be deprived of all interest ; but in penetrating the difficulty of the subject, we feel constrained to beseech of our judges all the kindness possible.

HISTORY. VARIETIES, CLINICAL AND SYMPTOMATIC.

The origin of this word goes back to the remotest antiquity and seems to be attached to the fable of Hermaphrodite, son of Mercury (*Ερμῆς*) and of Venus (*Ἀφροδίτη*), who remaining insensible to the charms of the nymph Salmacis, she obtained from the gods the decree that her body might be united to his.

Later, the possibility that an individual could at once possess the attributes of both sexes was fully admitted, and already the Fathers of the church, Tertullien among others, are seen violently opposed to them ; and if the Athenians throw into the sea the reputed hermaphrodites, the Romans are seen not to fail in employing the same kind of execution by precipitating them into the Tiber.

In the middle age, ignorance and passion still follow

these unhappy individuals, disinherited from nature ; and we will be able to recall, in this connection, numerous decrees of the provincial parliaments.

In the rigorous acceptation of the word, one will understand an hermaphrodite to be an individual who is capable of reproducing one of his species without the concurrence of another. This will be, in the animal kingdom, an exceptional peculiarity which will enable us to establish a complete similarity with what commonly passes in the greatest number of vegetable families ; one class only in the vegetable kingdom, the *Diæcia*, constituting an exception.

In the animal kingdom, as one descends the scale there appear animal hermaphrodites ; thus, for example, among the mollusks, and the zoöphytes ; but here still a distinction should be established ; although possessing male and female organs, among some species, the concha univalvata, for example, the animal requires, in order to be fecundated, the intervention of another individual of his kind ; in this case, the animal is at once fecundating and being fecundated.

On the contrary, take the concha bivalvata, and one will admire at once with what care and harmony the laws of nature have been established, in order that the fecundation of these creatures, their unceasing repetition, may not be interrupted ; for here the animal has a fixed domicile, permanent ; it is impossible for him to leave his rock ; in the act of fecundation he has no need of the help of another individual of his kind ; he is at once fecundating and being fecundated.

I will not extend farther these considerations of comparative anatomy ; I only wish to show the insensible gradation that one meets with in the attentive observation of nature ; at the same time to show what an immense distance separates the bisexuality of the inferior animals from this that has always been termed in man *hermaphrodisism* or *androgynia*.

As M. Tardieu has remarked,* “the name of hermaphrodite, under which one usually designates these individuals, is the worst that can be chosen, and gives the most false idea of their conformation.” One may say that it is not important which may be the predominant sex, the one or the other; often, even, both are too incompletely developed to be able to fill their rôle; the association has never, however, been perfect; it is scarcely so in two or three recent observations where the simultaneous presence of the essential and accessory organs of the male and female sex have been established; I will make, however, an exception for an observation reported by M. Doumic,† due to M. le Dr. Heppner, of St. Petersburg, also for two observations which are found at the end of this thesis; one taken from the journal *Lo Sperimentale* of Florence (1874), the other from the *Lyon Médical* same year.

Haller,‡ relying on the considerations of structure, had already said that the union of the two sexes was absolutely irreconcilable with the disposition of the pelvis; and later, Meckel, and Serves especially, really corroborate this opinion in taking for the base of their refutation the law, called by the latter, the law of balancing of the organs.

In the last century, we see already the authors divided into two parties, regarding the sex of the presumed hermaphrodites: one, with Osiander, thought that they are nearly all males, while Parsons§ and Hill, on the contrary, supposed them nearly all females.

To-day, the almost unanimous opinion is, that in the great majority of cases, that are wrongly called hermaphrodites, they are individuals of the male sex in

* Question médico-légale de l'indentité dans ses rapports avec les vices de conformation des organes sexuels, 1874.

† Doumic, *Gazette Med.*, Paris, 1872.

‡ *Comm. Soc. R. Gott.*, t. 1, pl. 1.

§ Parsons' *Medical and Critical Inquiry into the Nature of Hermaphrodites*. London, 1741.

whom the testicles have descended and are atrophied ; or rather, on the contrary, remain included within the cavity of the abdomen ; in whom a penis is recognized, having an incomplete development ; a urethra more or less opened at the base of the penis ; finally, a failure to unite of the two lateral parts which had as their special destination, on account of their approaching each other and their intimate adherence, the forming of the superficial coverings of the pouches, the scrotum, strictly speaking. In a word, the arrest of development which constitutes, strictly, hermaphrodisism, consists essentially in two special alterations of the external and internal genital organs, which have been designated under the name of hypospadias and cryptorchidia ; as M. Tardieu does not hesitate to say, "that one will not be in doubt that these are malformed men, but men." The same opinion is equally supported by M. Legrand du Saulle in his *Treatise of Legal Medicine* (1874).

Nevertheless, though the arrest of development in the male sex constitutes the greatest part of the facts in science under the name of hermaphrodisism, we will describe, after the authors, the three most important varieties ; we believe this division necessary, not only because we will be enabled better to group the facts, but because it accords with the observation and with the minute description given by Is. Geoffroy Saint Hilaire, Dutrochet and Marc.*

I. APPARENT HERMAPHRODISM IN THE MALE SEX.

Sometimes the arrest of development involves only the generative organs, sometimes there are phenomena worthy of being spoken of which belong to the general configuration of the individual. We will first describe the former, or phenomena localized in the generative sphere, properly speaking.

The penis offers, usually, an incomplete development ;

* Dict. en 30 ; Art. Hermaphrodisisme.

its length is more or less reduced ; it is formed by the union, the fusion of the two corpora cavernosa ; the glans is often malformed ; moreover, if it exists it remains uncovered, in consequence of the absence, or the want in length, of the prepuce. One will readily admit that if the volume of this organ is very slight, not exceeding in length two-thirds of an inch or an inch, it may sometimes be difficult to distinguish it from the clitoris, if besides there are added to this other vices of conformation. This penis is capable of an erection, and the intromission of this organ will depend directly upon the length which it can acquire at the moment of venereal spasm.

Below this penis, one recognizes a deformity also very important ; we allude to that arrest of development which has received the name of *hypospadias* : there are a number of varieties of this ; sometimes the urethra is opened at a point very nearly approached to the terminal extremity of the penis, and then it is not a true hermaphroditism ; sometimes, on the contrary, it is only towards the middle of the penis that a canal is observed which opens directly into the bladder ; finally, the most frequent variety is that in which an opening is found quite at the base of the penis, an orifice which is just beneath the pubis, in an infundibuliform cavity which we will describe presently.

In this case, one observes also the co-existence of other arrests of development. We know that the scrotum is the result of the intimate union of the two lateral folds which unite in the median line and form a well marked raphe, which corresponds superiorly to what is known under the name of the septum of the dartos. When this union of these lateral folds does not take place, and these two external processes from the blastoderm remain separated, there will result an absence of the scrotum, and each side will have the gross appearance of the labium majorum.

These two separated parts leave on the median line a

fissure, which extends from before backwards; sometimes this is very superficial, sometimes, on the contrary, it is a true hollow cavity, more or less funnel shaped. This cavity does not extend very far forward, the finger is soon arrested, and at the anterior and superior part one can recognize the abnormal opening of the urethra. If one wishes to carry the examination farther, the catheter may be introduced nearly into the bladder and the finger into this abnormal cavity, when the presence of the prostate, and even the vesiculæ seminales, will be established; most frequently, however, it will be nearly impossible to arrive at such precision in the diagnosis, the cavity being too shallow and the rectal touch giving but very uncertain information.

But a fact which leads still more to the confounding of the external conformation of these subjects with the special conformation of the female sex, is the absence of the testicles, or at least their permanent inclusion within the abdominal cavity. One will understand how necessary it is in these cases to practice a minute palpation; because the absence or presence of these organs goes to indicate more exactly, for the medical jurist, and for the expert, the course which he will follow in the decision which is necessary for the proper ranking of this individual in the civil state; or the motives which he can allege in favor of a rupture of the marriage.

Not only the lateral pouches which represent the scrotum ought to be examined, but the inguinal ring and the entire inguinal tract should be explored; because it is not exceptional to find, in those cases of presumed hermaphrodites, the testicles retained within the inguinal canal, from which their descent does not take place till the epoch of puberty. Finally, one should recall the interesting case of Alexina B——, reported by M. le Prof. Tardieu, in which the testicles were retained within the inguinal canal, and were the seat of a most violent congestion at the time of puberty, which was, for the physician, the first indication of a vice in conformation which was presented by this presumed young girl.

Moreover, in the variety of hermaphroditism with which we are occupied at present, the variety most frequently observed, one can say that the principal characteristics are comprised in the following observations: diminution in the size of the penis; hypospadias, generally well marked; absence of union of the two lateral parts which normally go to form the scrotum; and finally, cryptorchidie.

To these local signs of hermaphroditism, may be added a series of phenomena which belong to the general conformation of the individual; and often, too, not only are the external physical characters similar to the female exterior, but the real character, the habits, the passions, conform to the female character rather than to the male.

The stature is generally medium; the rotundity of body (*l'embonpoint*) is considerable; the skin is smooth and fine, deprived of hair upon the face as well as upon the trunk; the muscular system is slightly developed, or rather it is marked by a full adipose development; the muscular projections and the bony ridges are effaced; the extremities, in a word, like the face, have the appearance of the feminine type. The voice even has a high pitch, and is feeble. The pelvis is sufficiently developed, and the ilia project outwards; there is even an abnormal turning outwards of the ischio-pubic branches. The breasts are of considerable size. These individuals prefer sedentary occupations; they like garments of brilliant colors; are excessively coquettish and adore perfumes; an oriental extravagance reigns in their apartments (*obs. iv*); they are also passionately fond of needle-work, etc.; in a word, everything in the outward character contributes in keeping up the error as to the real sex of these individuals.

At the end of this essay, several observations can be seen which relate clearly to this form of hermaphroditism, therefore I will not stop to detail those examples, which are classical to-day, of Marie Marguerite, of Dreux, related by Worbes, which is found in the journal of Hufe-

land. To this same variety belongs equally the case of Justine, A. J., which was decided by the civil tribunal of Alais (1869), then by the courts of Montpellier (1872), and of Nîmes, after the first decision had been reversed by the Court of Cassation (1869); in the last place it was finally brought back before the civil tribunal of Alais (1873): the court then declared the individual "absolutely nothing, a nonentity, and annulled the marriage inscribed upon the registers of the civil state, and, consequently, the ante-nuptial pledge, which governed the agreements of the parties; and ordered that mention of the present decision be made on the margin of the act of celebration of the aforesaid marriage, thus annulled by the officer of the civil state of the said commonwealth of Alais."

II. APPARENT HERMAPHRODISM IN THE FEMALE SEX.

It is much more rare, as we have already said, to encounter in the female a disposition of the sexual organs such as could lead one in error as to their true sex, and consequently, such as would lead one to suppose that he had to do with an individual of the male sex. Nevertheless, several such cases exist in science, and these are, in summary, the peculiarities presented to the observer. The vagina is reduced to a simple funnel-shaped hollow cavity; it is imperforated or narrowed by bridles, which are so numerous that it is impossible to find the neck of the uterus by the touch; one cannot reach this organ than by a methodical palpation and by the simultaneous employment of the catheter and the rectal touch. The clitoris may be as voluminous as in the case of the hypospadias which we have related above; finally, singularly coincident, the meatus urinaris, in consequence of an unusual elongation of the urethra, may be found just beneath the clitoris, which fact increases the chance of error, when only a simple superficial examination is made. The labia majora, in these cases, are but slightly pronounced; often the nymphæ are scarcely marked, in consequence of an

arrest of development in all the parts. Finally, a last fact, which is prominent in some instances, and which still more singularly obscures the diagnosis, is the presence of the ovaries in the substance of the labia majora, in consequence of an inguinal hernia. It is then that only a most carefully conducted examination will enable us to differentiate the testicles from the ovaries (*Ectopie ovarienne*. Loumaigne, thèse inaugurale 1869). But, we repeat it, this variety is rare—really exceptional. In the great majority of the cases, it will be easy enough to establish this variety of hermaphroditism, which consists really and simply in an arrest of development, in a default of communication between the external and internal genital parts. It is true that, in these cases, *the ovaries, the sign par excellence of the female sex*, exist—sometimes displaced, sometimes in their normal situation—and indicate their presence not by the menses, which cannot appear, but by various periodical troubles, symptoms of congestion, increased secretions, hæmorrhages, etc., which resemble really the regular menstrual evolution.

Add to these local signs the entire group of external physical characteristics, and intellectual manifestations, which are really more conformed to the male sex than to the female, and it will be seen that it is with reason that the writers of the last century, and the beginning of this, have insisted with so much detail upon these analogous facts. The general complexion of these persons is much more masculine; the stature is increased, the body is lank, the limbs powerful; the muscular projections and the bony ridges are well pronounced; the hair is short, the hair follicles are developed and the surface of the body is covered with hair; the breasts are slightly developed; the depth of the pelvis is increased, and the menstruation is more or less completely wanting. Add to all this, the aptitude for a series of manly tastes, a preference for the occupations which require force and vigor, a deep voice, and you will have under your eyes, in a few words,

those creatures which the Romans designated, with just reason, under the name of *virago*. One feature alone which led to error in several of the cases cited was, that the clitoris was so long that it was capable of copulation; but, as M. Tardieu has said,* "this fact alone does not change the conditions upon which are founded the distinction of the sexes."

Marie-Madeleine Lefort, said Bécлар,† seemed to belong to the male sex, if one considered the size of the trunk and the extremities, the shoulders and the pelvis, the size of the larynx, the tone of the voice, the development of the beard, and the urethra prolonged beyond the symphysis pubis. But she possessed at the same time the essential and constitutive organs of woman, uterus and vagina. Below, and posteriorly to the peniform clitoris, was a fissure or vulva bordered by two narrow, short labia, which were united by a thick and dense membrane. At the root of the clitoris, this membrane was perforated with a round opening which gave passage to the urine and the menstrual discharge, and would have been sufficient, without doubt, to have made the vagina accessible if an incision had been made, between these two labia, from the base of the clitoris nearly to the posterior commissure. Since this instance, analogous cases have been reported by MM. Bouillaud and Manéc, Briquet, Richard, Gallard, Lefort.‡

Marc, in his article of the Dict. en 30, reports that a uterus fallen out of the vagina has sometimes led the inattentive and ignorant surgeons in error, who believed it to be a veritable penis. Such was the mistake of the surgeons and the chief magistrates of Toulouse respecting a woman whom they declared an hermaphrodite, in 1693, and ordered her to wear the clothing of males.

* Tardieu, loc. cit.

† Bulletin de la Société de la Faculté de Médecine, 1815.

‡ Lefort, Thèse d'Agrégation, 1863. Des vices de Conformation de l'utérus et du Vagin.

This woman coming to Paris, was subjected to an examination by able men, Saviard alone recognizing the error, reduced the prolapsed uterus, and gave to this woman her true sex.

Everard Home (*Philos. Trans.*, 1799,) cites a similar case.

It seems to me sufficient to prevent falling into a like error, to know that it may be committed.

(To be continued.)

VARIATIONS IN THE PULSE OF DIFFERENT ARTERIES.

BY DR. MORIZ BENEDICT, OF VIENNA.

(Translated from the "*Wiener Med. Presse*," No. 18, May 2, 1875, by Dr. H. GRADLER.)

One of the secrets of the organic world is the differentiation of homogeneous cells, whence result, in the course of development, their different functions. But it is likewise astonishing, how the well-defined specific nature of the different elementary parts can be maintained permanently, bathed as they all are in a nutrient fluid uniform in composition. Of primary importance for this purpose is the difference in the nature of the filtering walls of the vessels, though we are not acquainted with the details of that arrangement.

A second factor, resulting in different exosmosis in different tissues under the same central pressure, is the specific mode of distribution of the blood vessels and lymphatics. Amongst anatomists much engaged with injections, it is a test of ability to recognize the source of such preparations, especially microscopical specimens. This relation is the most interesting in the brain, where there is an aggregation of nerve cells, almost identical chemically and histologically, and still endowed with such vastly different functions. Facts in toxicology, rather than micro-chemistry, demonstrate the great mul-

tiplicity in the chemical affinity of elements scarcely distinguishable by their anatomical characters.

Ecker has learned from his injected specimen that every part of the brain can be recognized by the vascular disposition peculiar to it. I will also call to mind at this place the peculiar relation of the large peripheral lymph-spaces in the arachnoid cavity of the brain, as well as the subadventitial lymph-spaces. During life there exists in the brain a normal accumulation of lymph (hyperlymphosis), the distension of the arachnoid cavity with fluid being dependent on the blood pressure. At the moment of death, the reimbibition into the tissues commences—a fact formerly known, upon which special stress has been laid lately by Schiff and Hitzig. These entire lymph-spaces, and in particular the subadventitial spaces, are adapted manifestly to the peculiar conditions in the brain, which, more than any other organ, may be exposed for weeks and even months to an unusual exertion, an unusual tissue-change, which without special protective arrangement would soon lead to alteration and destruction of the chemical individuality of the different elements. The unusual reservoirs and means of drainage for the nutrient fluid furnished in excess, and the excreta of the local process of nutrition, are, however, adapted to serve as protective arrangements; at the same time they are best calculated to prevent concussion of the brain.

Another peculiarity of the brain is the fact, that not only corresponding surfaces of both hemispheres are, as a rule, excited simultaneously, but that in the exercise of psychical functions elementary parts of the hemispheres widely distant are brought into synchronous excitation by irradiation. This relation is dependent on an intimate connection of the circulation; accordingly, we find not only communications between all arteries in the circle of Willis, but also, as Ecker, and, more lately, Heubner, have pointed out, do we see inosculations between the districts of the individual vessels in the pia

mater, and hence, likewise, between the branches dipping into the cerebral convolutions.

But even these hydrostatic arrangements, as the result of which the central pressure is modified in the different tissues, would not suffice to maintain the chemical individuality of the tissues, were it not for another provision, capable of altering the velocity and tension of the blood. In artificial or functional irritation, as well as in irritation owing to contiguity of distant tissues, there must be some provision, by means of which the hæmodynamic conditions can be regulated according to the momentary requirements. The altered chemical condition of the irritated elements is one cause of an altered attraction; another factor is to be sought in the altered hæmodynamic mechanism.

The local regulators of the acceleration or retardation of the blood velocity, or alteration of the blood pressure, are the vaso motor nerves. Through their influence the musculature of the vessels, which is but too imperfectly understood, attains the importance of a local heart. This local heart is not capable—except in the hepatic artery—of augmenting by its activity the number of pulse-beats, nor can it probably reduce it, but it is able to bring about peculiar conditions of pressure and velocity, so that in the variety of association of activity of the separate nerves in a certain vascular district, we have not only an essential factor for the specific nutrition of the tissues, but also for an increase of nutrition during the time of exalted activity, and *vice versa*. To the same arrangement the trophic processes can be referred, and the time is probably not far distant at which we can trace a great part of the pathological processes to such disturbances of the local hearts, which take their origin in distant parts of the nervous system.

We know, at present, from the researches of Ludwig and Cyon, that an irritation starting in the heart can cause reflex dilatation of the vessels. On the other hand, we can hardly doubt but that the increase of central mo-

tive power on the occurrence of contraction of peripheral vessels, is also of reflex origin. Besides, we see in inflammatory fever, how intense local disturbances of circulation give rise to general disturbances of the vaso motor nerves; we see also, in the initial rigor, how the compensation of intense local dilatation of vessels is subject to physiological and *not* to hydrostatic laws. In fact, we can say, that the different local hearts are connected most intimately with each other and with the central heart by means of nervous bonds, the relations of which have been but imperfectly demonstrated by the means of anatomy and physiology.

It would be of the greatest importance to study in general the physiology of the terminal arteries, those branches regulating the nutrition of the organs; this, however, can be but imperfectly accomplished. But fortunately we are able to observe the distinct disturbances occurring in a terminal artery, *as a rebound, an echo, so to speak, in the larger arteries*, though this idea and its resulting observations have not as yet been carried out by physicians. Even in physiology we still meet with the methodic error of referring changes of tension caused by experimental stimulation or paralysis of nerves, which are observed in one region—to the entire vascular system. But in fact we can observe such local alterations in certain vascular districts, on the large vessels the pulse of which is perceptible to the finger, and some noticeable observations have induced me for some years to feel the pulse simultaneously in different arteries.

The first two observations are the following:

A lady of about 40 years of age came under my observation, with all the symptoms of an obstructed circulation in the arm. The hand was pale, cold, insensible, and at the same time painful. No pulse could be felt anywhere along the arm. The pulse of the subclavian artery was enormously full, so that at first sight the existence of an aneurism appeared probable. The history showed that this was not a congenital state, but only of

eight days duration. Embolism and thrombosis could be excluded on account of the relative want of importance of the symptoms, and the idea occurred to me, that there existed a vascular spasm, not sufficiently intense to stop the circulation, but sufficient to render the pulse imperceptible. The attempt to remove this state of the vaso motor nerves by belladonna and galvanization did not succeed; but after a few days the normal condition returned.

The subject of another observation was a young girl, complaining of headache and palpitation of the heart. On examination, I noticed that both carotid and both radial arteries showed an unusual, though equally full, pulse. Besides, all symptoms of an insufficiency of the bicuspid valve were present. The unusual fullness and hardness of the pulse in the region of the ascending aorta gave me the idea of examining the pulse in the region of the descending aorta, where I found that no pulse could at all be perceived. Recollecting my former case, the thought occurred to me that there might be in this case also a spasm of the arteries in the latter region; but a congenital obliteration in the descending part of the arch of the aorta was first to be excluded. All appearances of a collateral circulation were wanting. I insisted on a consultation with a celebrated authority on diseases of the circulatory organs. Shortly afterwards the pulse reappeared in the lower extremities, and the abnormal characters of the carotid and radial pulse disappeared, and even the apparent cardiac lesion was said to have vanished subsequently.

I made some other very striking observations on two other patients. One of them suffered for a long time from clonic spasm, consisting of flexion of the carpus, which involved occasionally also the elbow-joint, persisting for hours, and accompanied by diminished sensibility of the fingers; its duration was shortened by warmth. The attacks occurred repeatedly during the day, and would sometimes last during a whole day. After severe attacks a

sense of constriction was felt in the chest, the radial pulse was not perceptible on the right side, while on the left side it was very small and irregular. One day, when the patient had just passed out of an attack, an attempt was made to enlarge the pulse by nitrite of amyl.* In this I succeeded very promptly, and after the experiment had been repeated twice, both on palpation and auscultation a momentary arrest of the heart was observed, while a deep bronchial respiration was heard. After a few seconds the heart sounds became audible again, and after the lapse of ten minutes the cardiac impulse was very powerful. The radial pulse remained full for some time. (Still the attack continued for some hours, notwithstanding the experiment.) This experiment shows also what extent the vascular spasm can attain. A permanent enlargement of the pulse was only obtained by galvanization of the sympathetic; whether, however, a cure was effected, I could not learn.

A second instance was the case of an epileptic man, whose attack was always preceded by a premonitory vaso motor symptom in the shape of circumscribed redness of the left cheek.† I saw the man one day at this period, and an examination showed the pulse filiform in the carotid as well as the subclavian and radial arteries and the lower extremities. By strong galvanization of the sympathetic I succeeded in rendering the pulse fuller, and the attack was prevented.

No less striking are the appearances in *tic douloureux*, where either the pulse of the carotid artery is full during the attack or on the hand very small. That the carotid artery can be dilated like an aneurism by the expansion of the places of origin of the smaller arteries, I have witnessed both in *tic douloureux* (vide case 87 of the "Nervenpathologie") and hydrophobia. In the former

* Riegel has lately used this remedy to dilate the arteries in lead poisoning.

† I will here insist that an epileptic attack rarely occurs without vaso motor or psychical prodromata.

case the abnormal distension of the vessel disappeared with the affection, and in the latter case no anomaly was found in the cadaver.

Spasms of vessels or pareses in limited vascular districts are also a common symptom in hysteria.

I attach special importance to this method in diseases of the brain. Under normal circumstances a difference is often noted between the pulse of both carotids, and, as a rule, the radial pulse corresponding to the large carotid artery is in that case the smaller. In hemiplegia and cerebral disease, I have repeatedly observed, that on one side (in the former case the paralyzed side) both the pulse of the common carotid and of the arteries of the arm was small and filiform. Such a condition denotes a profound disturbance of circulation by dilatation in numerous vascular districts, and my idea to prognosticate from this condition the danger of apoplexy has in several instances been unhappily confirmed.

In Basedow's disease the pulse is usually large in both carotids and correspondingly small in both radial arteries. I am not at present enabled to perfect these observations on a larger scale; I can, therefore, merely recommend them most urgently to my colleagues. We can expect from this method not only the discovery of special facts, but even a further illumination of the causes of trophic processes and an increased accuracy of prognosis. Especially in local inflammations in the extremities can the observation of the local arterial tension be of interest.

FLEETWOOD CHURCHILL, author of "Churchill's Obstetrics," and kindred works, has lately retired from practice. His practice for many years of late has been confined wholly to obstetric and gynecologic consultations.

Book Reviews.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL AND EXAMINER may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

1. **PLAIN DIRECTIONS FOR ACCIDENTS, EMERGENCIES, AND POISONS.** Keep this where you can readily find it. By a Fellow of the College of Physicians of Philadelphia, and Physician to several of the Charitable Institutions of the same city. Fiftieth thousand. All rights reserved by the Author. Distributed to its Policy-Holders by the Mutual Life Insurance Company of New York. F. S. Winston, President.
2. **PLAIN DIRECTIONS FOR THE CARE OF THE SICK, AND RECIPES FOR SICK PEOPLE.** Keep this where you can readily find it. By a Fellow of the College of Physicians of Philadelphia, and Physician to several of the Charitable Institutions of the same city. Eightieth thousand. All rights reserved by the Author. Distributed to its Policy-Holders by the Mutual Life Insurance Company of New York. F. S. Winston, President.

These two little volumes are unique. Their gaily-illuminated covers suggest the dime novel and the ladies' magazine, while their contents treat of the accident in the street and the mishap in the family.

We are of those who advocate the widest possible dissemination of useful knowledge among the masses. But we are also of opinion that it is possible to give a little information, in certain cases, which may prove to be a dangerous thing. There are physicians who, in the sick room, discourse in such a manner as to produce the impression that they are the sole repositories of an incommunicable science. There are others yet who, on every possible occasion, deliver a species of medical lecture to all who chance to surround the sick bed. They who are truly wise do neither. The volumes before us, while they contain many excellent suggestions which a skilful

practitioner would endorse, yet share the error of the second class of men.

On page 48 of the first volume, for example, two unprofessional fingers are represented in the act of strapping an extensive incised wound of the thigh—such a wound as the veriest tyro in surgery would not attempt to close without the aid of sutures. If the artist intended to represent a temporary dressing merely, the procedure suggested is laughably inadequate. The strips of plaster are cut so short as to be entirely unfit for the purpose, and are as few and far between as the individuals who succeed in carrying the policy of an insurance company during the term of their natural lives. To speak more plainly, less than half of those who are insured are said to remain so; and there is a great deal less than half enough plaster on the aforesaid wound.

Still, a very little of the latter might go a long way, if the author can be believed; for he asserts, on the very next page, that “the edges of an incised wound of some length were successfully held together by a *postage stamp*, divided lengthwise into four strips”!

Here are also directions for removing foreign bodies from punctured wounds, by *making incisions* along the course of the wound; directions for *splitting the nail* with a penknife; directions regarding the treatment of *sloughing wounds*, with a description of the mode of repair by granulation. Here are also indications for using such remedies as aqua ammoniæ, tincture of opium, oil of turpentine, ipecac in powder and syrup, Glauber's salt, and compound cathartic pills.

We submit that if an author is disposed to write a book on Minor Surgery, it were well to indicate his purpose in its title. Show us one hundred policy-holders of the Mutual Life Insurance Company, who treat themselves for extensive incisions along the thigh, punctured wounds requiring interference, wounds that slough and wounds that granulate—who move their bowels with Glauber's salt, and empty their stomachs with sulphate of zinc; and we will point out a certain proportion of the

entire number whose widows are likely to realize from the investments made for them in the Company !

These volumes of themselves would scarcely deserve attention, were it not for the fact that they are circulated by a wealthy corporation, commanding a capital of seventy-two millions of dollars, and having ninety thousand policy-holders. One of these monographs has reached an edition of eighty thousand copies—truly an enormous edition for any work !

The author says there is scarcely any excuse for the “effrontery” of ringing up an apothecary, of a cold night, to supply ten cents worth of paregoric. Will the Mutual Life Insurance Company of New York excuse the “effrontery” of our asking why, when it was concluded to publish such volumes for the benefit of their policy-holders, they felt constrained to step outside of the medical profession of their own city, in order to find an author in Philadelphia ?

LESSONS ON PRESCRIPTIONS AND THE ART OF PRESCRIBING. By *W. Handel Griffiths, Ph.D., L.R.C.P.E.* London: Macmillan & Co. 1875. 12mo., pp. 150. Price, \$1.25.

Its title indicates its design, which it well fulfills. By careful attention to its instructions, a novice can learn to write a prescription accurately, in a very short time. One point the author fails to emphasize, which should be insisted on with something akin to energy, viz., an avoidance of abbreviations in writing prescriptions. Chapter 6 is on “Incompatibility,” and it is worth the price of the book. If it were in the reviewer’s power, every graduate of medicine in this country would commit this chapter to memory. Nearly the first half of the book—65 pages—is didactic, and the remainder consists of “Examples and Exercises.” The subject of prescription writing is so thoroughly written up, in works on *Materia Medica*, that nothing new remains to be culled by writers on this subject alone. This work embraces everything of profit to the senior student and practitioner, and will repay studying.

E.

BOOKS RECEIVED.

- BASTIAN.—Paralysis from Brain Diseases, in its common forms. Illustrations. D. Appleton & Co. \$1.75.
 DARWIN.—Insectivorous Plants. With illustrations. D. Appleton & Co. \$2.00.
 PAGET.—Clinical Lectures and Essays. D. Appleton & Co. \$5.00.

PAMPHLETS RECEIVED.

- ANALYSIS OF ONE THOUSAND CASES OF SKIN DISEASE, with Cases and Remarks on Treatment. By *L. Duncan Bulkley, A.M., M.D.*, Physician to the Skin Department, Demilt Dispensary, N. Y. Reprinted from The American Practitioner, 1875. Louisville: J. P. Marten & Co.
 AMERICAN CLINICAL LECTURES, Vol. 1, No. vii; Capillary Bronchitis of Adults. By *Calvin Ellis, M.D.*, Prof. of Clinical Medicine, Harvard University. New York: G. P. Putnam & Sons.
 ANNUAL ADDRESS before the California State Medical Society. By *A. B. Nixon, M.D.* Sacramento: Printed by H. S. Crocker & Co.
 ANNUAL ANNOUNCEMENTS for 1875-6, from following Medical Schools: Atlanta Medical College; Woman's Hospital Medical College, of Chicago; Savannah Medical College; Department of Medicine and Surgery, University of Nashville; Second Annual Announcement of the Hospital College of Medicine, Louisville, Ky., Medical Department of Central University; National Medical College of The Columbian University; University of Michigan, Department of Medicine and Surgery.

JOURNALS RECEIVED.

- The American Journal of the Medical Sciences—1875. August.
 The American Journal of Pharmacy—1875. August.
 The American Medical Weekly—1875. August 7, 14, and 21.
 The American Practitioner—1875. August.
 The Atlanta Medical and Surgical Journal—1875. August.
 The Archives of Dermatology—1875. July.
 The Boston Medical and Surgical Journal—1875. August 5, 12, and 19.
 The Canada Lancet—1875. August.
 The Canada Medical and Surgical Journal—1875. August.
 The Cincinnati Lancet and Observer—1875. August.
 The Cincinnati Medical Advance—1875. August.
 The Clinic—1875. August 7, 14, and 21.
 The Dental Cosmos—1875. August.
 The Detroit Review of Medicine and Pharmacy—1875. August.

The Druggists' Circular—1875. August.
 The Eclectic Medical Journal—1875. August.
 The Eclectic Medical Journal of Pennsylvania—1875. August.
 The Herald of Health—1875. August.
 The Journal of Materia Medica—1875. August.
 The London Lancet—1875. August.
 The Medical News and Library—1875. August.
 The Medical Record, New York—1875. August 7, 14, and 21.
 The Medical and Surgical Reporter, Philadelphia—1875. August 7, 14, and 21.
 The Monthly Abstract of Medical Sciences—1875. August.
 The Nashville Journal of Medicine and Surgery—1875. August.
 The New York Medical Journal—1875. August.
 The Pacific Medical and Surgical Journal—1875. August.
 The Peninsular Journal of Medicine—1875. August.
 The Philadelphia Medical Times—1875. August 7, 14, and 21.
 The Sanitarian—1875. August.
 The Sanitary Journal—1875. August.
 The St. Louis Medical and Surgical Journal—1875. August.
 The United States Medical Investigator—1875. August 2.
 Der Feldarzt—1875. Nr. 12.
 Der Irrenfreund—Jahr. xvii, Nr. 4.
 L'Anatomie et de la Physiologie Journal de. Ch. Robin—No. 4, Mai et Juillet & Soët, Paris, 1875.
 La France Medicale—1875. Nrs. 53, 54.
 Le Progres Medicale, Paris, 3e Annee—Nos. 26, 27, 28, 29, 30.
 Memorabilien—Jahr. xx, Heft. 4.

Dr. LYMAN WARE, just returned from Europe, informs us that graduates in medicine who may be going abroad to study, will be admitted—on showing their diplomas, and the payment of a small fee—to six months dressing and perpetual medical and surgical practice, to the London Hospitals, which is unequaled in the way of many practical advantages.

Chicago Mortality Report for July, 1875. Reported by Dr. BEN. C. MILLER, Sanitary Superintendent.

BOARD OF HEALTH OF THE CITY OF CHICAGO, {
 HEALTH OFFICE, CHICAGO, Aug. 11, 1875. }

To the Editors of the Chicago Medical Journal and Examiner :

SIRS—I enclose you the mortality report for July. You will see that compared with June, the increase is 638, but compared with the corresponding month of last year, shows a decrease of 288. This makes a good showing for the sanitary condition of Chicago. The mean thermometer

has been lower than last year, but subjected to greater variations; this has been accompanied by an unusual number of cases of bowel affections, but fortunately of not a fatal character. If we get through the summer with as good a comparison with the past as we have up to date, we will have reason to congratulate ourselves. Respectfully yours,

BEN. C. MILLER, *San. Supt.*

Accident, burns	1	Fever, congestive	2
" crushed	2	" intermittent	1
" drowning	14	" puerperal	4
" fall	2	" remittent	1
" run over by 'bus	1	" scarlet	11
" scalding	2	" typhoid	12
" railroad	5	Gastritis	3
" shooting	2	Gastro-enteritis	6
" strangulation	1	Hæmorrhage	1
Abscess, psoas	1	Heart, disease of	4
Abscesses	2	" dropsy of	1
Anæmia	2	" hypertrophy of	1
Apoplexy	6	" mitral valves, disease of	1
Arachnitis	1	" rheumatism of	1
Bowels, consumption of	2	" embolism of	2
" obstruction of	1	" rupture of	1
" ulceration of	1	" valvular disease of	3
Brain, abscess of	1	Hepatitis	1
" congestion of	12	Hip joint, disease of	1
" disease of	1	Hernia	1
" inflammation of	2	Hydrocephalus	9
" softening of	4	Inanition	29
Bronchitis	10	Jaundice	1
" capillary	3	Kidneys, Bright's disease of	3
Cancer	1	" disease of	4
" of arm	1	Liver, atrophy of	1
" of breast	3	" cirrhosis of	2
" of face	1	Lungs, congestion of	4
" of liver	2	" emphysema of	1
" of neck	1	Malformation	1
" of rectum	1	Manslaughter	2
" of stomach	2	Metro-peritonitis	1
" of uterus	3	Measles	11
Cholera infantum	412	Meningitis	19
" morbus	12	" cerebro-spinal	8
Consumption	42	" tubercular	6
Convulsions	146	Old age	12
" puerperal	2	Paralysis	2
Croup	14	Pericarditis	2
Cyanosis	1	Peritonitis	3
Cystitis	3	Pneumonia	19
Debility, general	8	" typhoid	1
Diabetes	1	Pyæmia	2
Diarrhœa	80	Rheumatism	1
" chronic	4	Spina bifida	1
Diphtheria	7	Stomach, congestion of	1
Dropsy	3	" ulceration of	3
Dysentery	28	Suicide	3
Endo-carditis	2	Syphilis	3
Enteritis	23	Tabes mesenterica	16
Entero-colitis	24	Teething	12
Erysipelas	2	Trismus	1

Uræmia.....	2	Whooping cough.....	11
Urine, retention of.....	1		
Uterus, sarcoma of.....	1	Total.....	1,171

Premature births, 9; Still births, 65. Total, 74.

COMPARISON.

Deaths in July, 1875, 1,171; in June, 1875, 533. Increase, 638. Deaths in July, 1874, 1454. Decrease, 283.

AGES.

Under one year.....	671	Thirty years to forty.....	45
One year to two.....	204	Forty " " fifty.....	24
Two years to three.....	31	Fifty " " sixty.....	26
Three " " four.....	17	Sixty " " seventy.....	22
Four " " five.....	14	Seventy " " eighty.....	19
Five " " ten.....	17	Eighty " " ninety.....	5
Ten " " twenty.....	36		
Twenty " " thirty.....	40	Total.....	1,171

White.....	1,160	Males.....	629	Married.....	146
Colored.....	11	Females.....	542	Single.....	1,025
Total.....	1,161	Total.....	1,171	Total.....	1,171

NATIVITIES.

Belgium.....	1	England.....	14	Scotland.....	2
Bohemia.....	4	France.....	1	Sweden.....	4
Canada.....	4	Germany.....	65	Wales.....	1
Native—Chicago.....	225	Holland.....	2	Unknown.....	8
Foreign, ".....	679	Ireland.....	42		
U. States, other parts.....	111	Norway.....	5	Total.....	1,171
Denmark.....	3				

Deaths daily, 37½. Mean thermometer, 68.7°. Rain fall, 7.20 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.	Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	4	5,725	one death in 1,431	11	30	14,022	one death in 467
2	4	4,830	" " 1,208	12	24	16,792	" " 699
3	20	14,861	" " 743	13	21	17,892	" " 852
4	20	15,361	" " 768	14	33	16,720	" " 507
5	51	20,078	" " 394	15	237	45,545	" " 192
6	151	35,916	" " 238	16	78	21,922	" " 281
7	112	31,722	" " 283	17	49	20,777	" " 424
8	77	29,143	" " 379	18	54	21,392	" " 394
9	80	31,654	" " 398	19	9	4,677	" " 519
10	18	17,385	" " 966	20	15	8,995	" " 599

Ratio of deaths to population in 1874, one death in 338.

No. deaths in Wards.....	1,087	Manslaughter.....	2
Accidents.....	30	Protestant Orphan Asylum.....	1
County Hospital.....	6	St. Joseph's Hospital.....	2
Foundlings' Home.....	28	Women's Refuge.....	2
Hospital Alexian Bros.....	6	Suicides.....	3
Home for Friendless.....	1		
Good Shephards.....	1	Total.....	1,171
Mercy Hospital.....	2		

Deaths.

MAYNARD. August 20, at her residence, 180 Loomis street, after a protracted and painful illness, Maria M., wife of Dr. Wm. J. Maynard.

ANNOUNCEMENTS FOR THE MONTH.

MONDAYS.

SOCIETIES.

Mondays, Sept. 6th and 20th—Chicago Medical Society, regular meetings at Gault House, 8 P. M.

Mondays, Sept. 13th and 27th—Chicago Association of Physicians and Surgeons, regular meetings at Pacific Hotel, 8 P. M.

CLINICS.

Every Monday. At Illinois Charitable Eye and Ear Infirmary (Peoria and Adams Sts.) 2 P. M. Prof. Holmes.

At Chicago Medical College, 2 P. M. *Gynecological*—Dr. Merriman.

At Central Dispensary (239 W. Van Buren St.) 2 P. M., *Gynecological*—Dr. Adolphus; 3 P. M., *Medicine*—Dr. Bridge.

TUESDAYS.

CLINICS. *Every Tuesday.*

At Cook County Hospital, 3 P. M., *Surgical*—Prof. Freer.

At Chicago Medical College, 2 P. M., *Gynecological*—Dr. Roler.

WEDNESDAYS.

CLINICS. *Every Wednesday.*

At Chicago Medical College, 2 P. M., *Gynecological*—Dr. Nelson.

At "Woman's Dispensary," (229 30th St.) 11 A. M., *Gynecological*—Drs. Hurlbut and Jackson; 1 P. M., *Electrical*—Dr. P. S. Hayes.

At Central Dispensary, 3 P. M. *Medical*—Dr. Bridge.

THURSDAYS.

CLINICS. *Every Thursday.*

At the Illinois Charitable Eye and Ear Infirmary, 2 P. M., Prof. Holmes.

At Chicago Medical College, 2 P. M., *Gynecological*—Dr. Merriman.

At Central Dispensary, 2 P. M., *Gynecological*—Dr. Adolphus.

FRIDAYS.

CLINICS. *Every Friday.*

At Cook County Hospital, 3 P. M., *Surgical*—Prof. Freer.

At Chicago Medical College, 2 P. M., *Gynecological*—Dr. Roler.

SATURDAYS.

CLINICS. *Every Saturday.*

At "Woman's Dispensary," 11 A. M., Drs. Hurlbut and Jackson; at 1 P. M., Dr. P. S. Hayes.

At Chicago Medical College, 2 P. M., *Gynecological*—Dr. Nelson.

THE
Chicago Medical Journal
AND
EXAMINER.

VOL. XXXII. — OCTOBER, 1875. — No. 10.

Original Communications.

THE CAUSES, PATHOLOGY, AND INDICATIONS FOR
TREATMENT, OF BOWEL AFFECTIONS OF
YOUNG CHILDREN.

READ BEFORE THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

BY N. S. DAVIS, M.D., CHICAGO.

The very great mortality among children under three years of age, from affections of the alimentary canal, during the two warmest months of the year, has very properly attracted the attention of many, both in and out of our profession. And as there is an increasing desire on the part of the more enlightened citizens in our large cities, to mitigate the suffering and lessen the mortality among these little ones, it is very desirable that the efficient causes of the sickness and mortality should be well understood. For on this will depend the judiciousness and efficiency of the prophylactic and sanitary measures to be adopted for their benefit.

In looking over the statistics of mortality in this city, from June 1st, 1874, to Aug. 1st, 1875, we find the following results:

	1874.							1875.						
	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
Deaths over five years.....	222	279	284	239	258	232	263	284	197	271	288	290	238	236
Deaths under five years and over two.	31	58	44	48	41	36	36	50	31	63	52	68	38	58
Deaths under two years.....	312	1123	841	517	261	163	146	209	215	216	323	218	263	874
Total Mortality.....	565	1460	1169	804	560	430	445	543	443	550	663	576	529	1168

It will be seen by the details of this table that the gross mortality in fourteen months, was 9905; and of this number 5680 were literally babies under two years of age; only 654 between two and five years; and 3571 over five years of age.

The mortality over five years of age is distributed pretty uniformly throughout the year, the lowest being 197 in February, and the highest 290 in May.

The same is true of the mortality between two and five years of age, the lowest being 31 in each of the months of February and June, and the highest 68 in May. The mortality of infants under two years, however, follows a very different rule; the lowest being 146 in December, and the highest 1123 in July, 1874, and 874 in July, 1875. Indeed, almost half of the entire mortality of infants is crowded into the months of July, August and September of each year. The increase is abrupt and rapid, as will be seen by comparing the numbers for June and July of each year. For instance, the deaths in June, 1874, were, under two years of age, 312, in July, 1123; in June, 1875, 263, and in July, 874. Or, to make the comparison still closer, the week ending June 26, 1875, gave 69 deaths under two years, while the next week, ending July 3rd, gave 140; the next, ending July 10th, 183; and that ending July 17th, 253, which was the highest for any week during the present summer. In 1874, the week ending June 20th, gave a mortality under two years, of only 48; the next week, ending June 27th, 104;

that ending July 4th, 131; that ending July 11th, 250; and the next, ending July 18th, 281, which was the climax for that year. The decline of infant mortality after reaching its climax, about the middle of July, is more gradual than the access, and extends through August and September, reaching in October about the average for the remainder of the year.

If we turn again to the details of the mortality tables, we shall find nearly all of the increased infant mortality during July, August, and September, to be caused by affections of the alimentary canal. This is illustrated by the following table, made up from the returns to the Board of Health:

	1874.							1875.						
	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.
Cholera Infantum.....	71	604	393	20	34	5	1	1	-----	-----	14	7	41	403
Cholera Morbus.....	2	11	7	1	1	-----	-----	-----	-----	-----	-----	-----	1	12
Diarrhoea.....	6	74	81	45	22	7	4	6	3	2	13	3	18	86
Dysentery.....	6	47	47	29	20	3	1	1	4	2	8	1	9	45
Total Bowel Affections...	85	736	528	284	77	15	6	8	7	4	35	11	69	546

It is thus seen that of 1796 deaths from diseases classed under the heads of cholera infantum, cholera morbus, diarrhoea, and dysentery, 1548 occurred during the months of July, August, and September, leaving only 248 for the other nine months of the year. Of the 1796 deaths at all ages, from bowel affections, 1339 are from cholera infantum alone. And of the 1339, there occurred in July 604, August 393, Sept. 209, making an aggregate of 1206 in these three months. Of the remainder, 71 occurred in June, and 34 in October, leaving only 28 in the other seven months of the year. The facts developed by this analysis of the mortality of our city for the past twelve or fourteen months, are in exact accordance with the facts of every year, and are equally illus-

trated by the mortality statistics of every city located in the middle and northern belts of the United States, east of the Rocky mountains.

Substantially, then, we may say that the bowel affections of children are strictly endemic and limited definitely to the warm season of the year. A disease, or group of diseases that recurs with so much regularity every year, and proves so destructive to infantile life, must have fixed and definite causes on which it depends. First among these causes we must place heat, or certain elevation of atmospheric temperature. Twenty-five years of observation in this city, have led me to regard the first week of continuous hot, summer weather, that occurs after the middle of June, in this locality, as developing the beginning of the bowel affections of children for that season, with as much certainty as any other event in nature. This is well illustrated by comparing the tables already given with the meteorological conditions as exemplified in the tables furnished for the Signal Service Bureau. For instance, in June, 1874, the weeks ending the 13th and 20th respectively, gave an average mean daily temperature of 63.6° and 72.4° F., and only 1 death from cholera infantum was reported during the first, and 3 during the second. But the next week, ending the 27th, gave a mean daily temperature of 80.3° F., and 40 deaths from this disease. Also in June, 1875, up to the 19th of the month, the highest daily average range of temperature for any one week was 64° F., and only 4 deaths from cholera infantum had occurred in the 19 days. But the next week ending June 26, the temperature averaged 70.4° F., and 13 deaths occurred from that disease. The effect of temperature is again shown by comparing the mortality and temperature of the same month for different years. Thus July, 1874, gave a mortality from cholera infantum of 604, and a mean daily temperature of 74.7° F., while July, 1875, gave only 403 deaths from that disease, and a mean daily temperature of 67.2° F. It is not merely the high average temperature that influences the

mortality from these intestinal affections, but its continuance through the twenty-four hours, and the extremes of the seasons. For instance, during the week ending June 12th, 1875, the thermometer rose on the 11th, at 2 P. M., to 87° F., but at 9 P. M. it had fallen to 71°, and at 7 the next morning to 50°, and no death from cholera infantum during that week.

During the week ending June 26th, the temperature rose to 72° F., at 2 P. M. of the 22d, and continued above that point night and day until it reached 83° F., on the afternoon of the 24th, making three days and nights of continuous high temperature. And it was during these three days that cholera infantum commenced its work for this year, 13 deaths from it having been reported by the end of the week. Yet the maximum temperature of this week was 4° below the maximum of the week ending June 12th. But the tables of mortality do not give us the full data for judging of the effects of temperature in the production of disease; because many who are attacked in one week will not die until from one to six weeks afterwards. Hence, to judge correctly of the relation of certain atmospheric conditions to the prevalence of any given disease, we need a record of the date of attacks instead of the date of deaths. From the observations of many years, aided by some written records, I am satisfied that 90 per cent. of all the cases of cholera infantum and serous diarrhœa that occur during each year, have their beginnings during the first four weeks of high summer temperature; which, in this city, is usually between the 20th of June and the 20th of July. During the last two seasons I have taken great care to inquire concerning the date of the initial symptoms in all cases of bowel affections in children, coming under my observation, and I have very rarely found one in August or September that had not had its beginnings in July or the last week in June.

The same remark does not apply, however, to dysentery or ileo-colitis. I will go still further, and claim as

the result of my inquiries, that four-fifths of all the attacks of cholera infantum and diarrhoea in young children develop their initial symptoms during those special periods when we have from two to five or six consecutive days and *nights* of high temperature, with stillness or only light winds and a high atmospheric moisture. Whether the morbid effects are induced by these conditions directly, or by the absence of ozone and electricity, which generally accompany the conditions named, must be left for further observation to determine.

While the atmospheric conditions just alluded to, constitute the efficient or determining causes of the disease under consideration, there are some collateral circumstances that greatly increase their efficiency. Of these, living in crowded, ill ventilated, uncleanly, and damp dwellings or localities, are of the greatest importance. To be satisfied of this, we need only to compare the ratio of infant mortality in different wards and sections of the same city. Or compare the ratio of mortality among the children of foreign born parents, with those of the native population. But all these collateral conditions exist as much at one season of the year as another, and hence it is evident that the influence they exert is only secondary. The popular notion that a large part of the bowel affections, so destructive to infantile life, are induced by the growth of the first set of teeth irritating the gums, is sufficiently disproved by the statistical facts already given. I presume no one will pretend that there were not as many children "cutting teeth" in this city; during the months of February and March, of the present year, as in July; and yet not a death occurred from cholera infantum during the two former, while 403 were buried during the latter. That the imperfect development of the mucous membrane of the alimentary canal, and the extreme sensitiveness of the nervous structures during the first two years of life, render children during that period, extremely sensitive to the relaxing influence of high temperature combined with the coincident atmos-

pheric conditions previously stated, is true; and is sufficient to explain the great prevalence of the disease at that period of life. But that the simple growth of the teeth has any more influence than the growth of any other bone in the body, we have no reason to believe.

If cholera infantum, and the ordinary intestinal affections of young children, arise from the atmospheric conditions we have named, what is the *modus operandi* of these conditions? In other words, what is the essential pathology of these affections?

It is a well established fact that heat increases the *excitability* of living animal tissues, while by separating the organic atoms farther from each other, it diminishes the tonic force of vital affinity. When to this effect of temperature is added the depressing effect of a deficiency of ozone, that generally accompanies high temperature and high degrees of atmospheric moisture, we have just that combination of influences calculated to establish a morbid degree of sensitiveness coupled with loss of tone in the delicate mucous membrane of the alimentary canal in young children. These pathological conditions diminish the natural function of the membrane as an absorbing surface, and increase the tendency to exudation or effusion. Hence the frequent and thin discharges, varying in degree from only two or three per day, of a semi-fluid character, up to the most violent cholera morbus.

Though morbid sensitiveness and relaxation or loss of tonic force constitute the primary and essential pathological changes in these affections, yet others follow, such as general weakness, rapid loss of flesh, and in many cases the establishment of inflammatory action in portions of the mucous membrane. When this latter change takes place, there accompanies it more or less febrile action, and small mucous discharges, sometimes mixed with blood.

If what has been said in regard to the atmospheric conditions which determine the attacks of bowel affec-

tions in young children, is true, it is plain that all sanitary or prophylactic measures must have for their object an interruption of the high temperature of such seasons as we have described, or the counteraction of the effects on the living system. The most effectual methods of doing this, are the removal of the infants, either to an elevated, hilly or mountainous region, where the water would be pure, the air dry, and the nights cool; or to floating hospital ships, in which they may be carried out far enough from land to get the cooler and purer air of the sea or lake. To be effectual in *preventing* disease, these measures should be called into active operation coincidently with the first week of continuous warm weather, each year, and continued diligently until the first six weeks of high summer temperature have passed. If such measures are deferred until the middle of July, they will do very little in lessening the number of cases, because a very large majority of the cases will have already passed their initial stage. Yet they may still be of great service as curative agents in aiding to restore those already more or less sick. In cases not able to adopt either of the measures just named, the next most effectual preventive measures are free ventilation of the dwellings, and especially the sleeping rooms, judicious bathing, and whenever the temperature of the evening continues above 70° F., beyond 8 o'clock, P. M., let the abdomen and whole trunk of the body be enveloped in a towel wet in cool water, and left to dry out gradually during the night. Let the infants be taken out freely in the open air during the pleasantest part of each day. If the child begins to look pale, its flesh to feel soft and flabby, and the passages from the bowels to be slightly more frequent and fluid than natural, the following formula may be used with great benefit: *R.* Aromat. Sulph. Acid, 3ij; Tinct. Opii, 3j; Tinct. Cinchonæ, 3jss; Syr. Prun. Virgin., 3jss. *M.* From five to ten drops of this may be given in a teaspoonful of water, to a child under eight months of age. From ten to fifteen drops

may be given when the child is between eight and eighteen months, and it may be repeated from one to three times a day. The indications for treatment after attacks have fairly commenced, are so directly deducible from the pathological conditions already stated, and I have, in former years, so often expressed my views of the best means for fulfilling those indications, that I will not repeat them here.

CLOTH TENTS.

By C. HENRI LEONARD, M.D., DETROIT, MICH.

I have been using quite extensively in my gynecological practice, a tent that I have made out of cloth. It has proven of so much service to me that I have thought it might be of value to give it to the profession.

A "cloth tent" is not a new thing *in toto*; for Dr. V. A. Taliafero, of Columbus, Georgia, wrote of them some three years ago.* To him the introduction of cloth tents is generally ascribed; but they were in use a great many centuries before his time, though for a little different purpose. Hippocrates† used them for anal fistulæ, after they were medicated, and, judging from the knowledge he had of the *local* treatment of female diseases, it would not be unfair to suppose that a somewhat similar use was made of them, as Taliafero has proposed. Another way Hippocrates had of making them, was to wind a *horse hair* around four or five pieces of lint laid lengthwise, till he got the proper conoidal or tent-like form.

I had used them, as Taliafero made them, for intra-uterine applications, with but partial success. They were quite troublesome, from their great "slimsiness" when wet with a solution that was to be carried to the fundus, or by cervical mucus.

* The *Journal of the Gynecological Society of Boston*, 1872, p. 27.

† On *Fistula*.

Some time ago I had occasion to make Emmet's operation upon a conoid cervix, for the relief of dysmenorrhœa and sterility, and I made use of them for intra-cervical packing; that is, to keep the cut edges of the cervical canal from uniting. At the first application they were very readily introduced (a sponge-tent having previously been used), and seemed to be just the thing. On the next day's visit, the neck having contracted somewhat, I was completely foiled in their introduction, and so had to resort to lint plugging. It at once struck me that if a *wire* could be introduced, in some way, *into* the cloth cone (Hippocrates had stiffened them by wrapping them around with horse hair), their objectionable feature would be entirely removed.

On my return to the office, I tried rolling a piece of hair wire into the cone and found that it answered exactly. Since then I have made use of them for almost all purposes as a dressing-applicator to the uterine cavity. They are equally applicable for dressing any other sinus-like canal, whether from wounds or otherwise.

To make one, you need but a strip of linen 6 inches in length, by $\frac{3}{4}$ of an inch in width, a piece of hair wire 4 inches long, and a few inches of common thread. Roll one corner of the linen strip lightly between the thumb and finger, then unroll and place the centre of the wire at the corner so rolled, and then roll the cloth at this corner over it (*spirally*, just as you would go to work to make a paper lamp-lighter,) till you get *almost* to the other corner of the same end, then bend the wire upon itself (double it, in other words,) so that the two extremities will point to the unwound portion of the linen; this done, continue rolling the linen, in a *spiral* manner, about the doubled wire till exhausted, then tie with the thread the last spiral turn about the wire. You now have a tent about $2\frac{1}{2}$ inches in length, and one sufficiently firm to enter *any* normal uterine canal, and most *any* abnormal one. You can bend it to any curve you choose to facilitate its introduction. It has still another advan-

tage over all other tents, in that you can leave it *in situ* (as I frequently do, for 24 hours,) with *no* danger to your patient, as it is *inexpansible*, and hence no excitator of metritis, though a stimulator (from its very slight mechanical irritation) to the endometrium. By so doing you can get a *prolonged* action of a medicament upon the lining membrane of the uterus, which is impossible to get by any other method of application. Further, you need not use such energetic local applications, and you may be sure that they reach the *whole* uterine cavity; something you cannot do with our intra-uterine applicators, unless you are a very skillful manipulator. The shape of the fundus-cavity is an anatomical proof of the great difficulty of making a complete application with the common metal applicators; whereas the cloth tent, by meeting with resistance at the fundus, immediately doubles upon itself, thus occupying the whole cavity.

You can make them of any *size*, and of any degree of stiffness, by increasing the thickness of cloth, and the size, or number of doublings, of your wire. I have them of all sizes, from those suitable for an ante-pubic uterus, to one as large as your index finger.

I use them now for cleansing the uterine tract previous to an application of astringents or other medicaments thereto, and find they clean away the tenacious mucus much better than a syringe or a wisp of cotton, on Emmet's applicator. Indeed, it is invaluable in many ways. By leaving the thread without the vulva, the patient can as easily and safely remove it at her residence, as can her physician. You have only to remember to tie a string (or a colored thread) to the cotton pledget you leave in the vagina, so that she may be made aware which to remove (pull) first.

Taking all these points into consideration, with their plea of cheapness and cleanliness (to the operator, for they are thrown away as fast as used, and need be touched only with the tip of the dressing forceps,) I am sure they will commend themselves to any one

who will take the trouble to make up a half-dozen for trial.

I now submit a brief chronological *résumé* of "uterine tenting." In this history, as in that of all other histories, it is impossible not to recognize that *resurgam* is the epitaph of all things, and that history of the succession of ages is but the unfolding of the truthfulness of these prophecies. In other words, that a modern inventor can hope but to be a reviver of some long forgotten principle; at least this is oftener the case than otherwise.

SPONGE TENTS.—Re-introduced by Simpson, in 1844; were known to Aetius and Hippocrates, and in constant use by them, though in the succeeding centuries overlooked and forgotten. Aetius also used *metal* uterine dilators, similar to Peaslee's of to day.

SLIPPERY ELM TENTS.—If I should say *wood* tents, then I must say *re-introduced* by Storer, of Boston, in 1855, when in Scotland, and a student of the great Simpson. It was in an article read before the Medical and Chirurgical Society of Edinburgh, that he spoke of their usefulness. Byford, in his work on the Uterus, (1870), was, probably, most instrumental in getting them before Western practitioners; though, if I recollect aright, he has given no credit to Storer, in that work. The Hippocratic gynecologists made use of hollow *wooden* tents for opening the uterus, as well as *leaden* pipelets. There was a two-fold action, in case of the wooden ones: 1st, a swelling of the tube; and 2nd, an opportunity for the introduction of aromatic fumes (a favorite method for treating sterility, from the shutting up of the os uteri,) into the uterine cavity. After the mouth of the womb was open they applied cantharides, myrrh, etc., to the cavity of the organ. Intra-uterine suppositories were also in vogue.

LAMINARIA DIGITATA.—Introduced in 1862, by Sloan, of Ayr, Scotland. They were then unperforated. Greenhalgh, of London, afterward conceived the idea of increasing their utility by longitudinal perforation, as we now find them in the market.

LAMINARIA AND SPONGE COMBINED.—I have never seen one of this kind, but Dr. Martin, of Boston (1870), speaks of their advantage over either the “laminaria” or “sponge,” when they are used separately. How his combination is made, I do not know.

CLOTH.—Hippocratic in their origin. Re-introduced by Dr. Taliafero, in 1872.

EXTENSIVE ABDOMINAL WOUND CAUSED BY A BULL'S HORN.

By W. A. CARMICHAEL, M.D., LOVELAND, O.

May 27, 1873. I was called to visit Mr. Joseph Branch, of Branch Hill, Clermont county, Ohio, aged 72 years; occupation, farmer. One hour previous to my seeing him he had been gored by a bull, the horn having penetrated the right side, below the margin of the ribs, producing a transverse opening seven inches long, and entering into the cavity of the abdomen. Through this lacerated wound a portion of the bowels protruded, which were gathered up from the ground by Mr. Branch, as he stood erect, and by him replaced in the cavity of the abdomen. Having some distance to go before reaching his home, and while being conveyed there, his bowels protruded, and were replaced five times by those caring for him.

On my arrival at the bedside of Mr. Branch, I found him suffering from the shock to his nervous system, and from hæmorrhage, yet his mind was composed and firm as a general on the battle field. After removing some bloody clothes from the side, the intestines again escaped, or a portion of them, consisting of the ascending colon and omentum. After cleansing them of all dust and dirt, I once more returned them to the cavity of the abdomen, closing the opening with sutures and adhesive plasters, and then, applying the water-dressing compress

and bandage, gave an opiate from which rest was procured.

Wednesday, May 28th. Reaction fully established; good night's rest; no fever. Continued same treatment.

Thursday, 29th. Patient rested well; no fever; ordered cathartic.

Friday, 30th. Had a good night's rest; cathartic acted freely; changed plasters; continued water dressing, with solution of carbolic acid to cloths.

Saturday, 31st. No material change; pulse natural; no inflammation; some fullness at seat of injury; treatment continued.

Sunday, June 1st. Removed dressings and a portion of the sutures; some little suppuration.

Monday, 2d. Removed the remaining sutures; continued support, with the adhesive strips, carbolic ointment, compress and bandage; bowels move regularly; the fullness remains in side, but no inflammation; some soreness.

Wednesday, 4th. Patient continues to do well; thinks of plowing corn if no danger; advised to keep quiet.

Saturday, 7th. Removed dressings this day, and find wound completely closed, and no suppuration, this being just twelve days from the time of injury. Thus I dismiss my patient in a manner well, without having suffered from fever, and having had very little inflammation, and that only at the external wound.

This is one case, if not the only one on record, where such extensive injury has occurred with so little constitutional disturbance, and terminating favorably and completely in twelve days. The recovery of a patient, 72 years of age, after such an injury, makes this case one of peculiar interest to the profession.

July 20th, 1875. I this day saw Mr. Joseph Branch, who is now enjoying better health than he did previous to his injury, from which he has had no trouble or inconvenience the past two years, nor has he any at this time.

CASE OF DOUBLE VAGINA AND UTERUS,
WITH PREGNANCY OF THE RIGHT UTERUS AND DELIVERY THROUGH
THE LEFT VAGINA.

By A. E. HOADLEY, M.D., CHICAGO.

Mrs. S—, a large and robust woman, of German nationality, nineteen years of age, and in first pregnancy, summoned me on the 14th day of August, 1874, to attend her in confinement. I was informed that the patient had been experiencing regular and active labor pains for twelve hours. An examination revealed the fact that she had a double vagina and a double uterus, with pregnancy of the right uterus; the uteri lying side by side, with the two necks closely united, the vaginal septum extending from between them and terminating in a thick round cord, or fold of mucous membrane, just inside the vulva, so that the external genitals presented a normal appearance. On separating the labia, the outer end of the septum could be seen extending from the symphysis pubis to the fourchette, giving to each vaginal orifice the same shape and size.

Considering the case one of interest to the profession on account of its being very rare, I invited Dr. J. D. Skeer to visit the patient and examine the case with me. By the aid of the sound, the left or empty uterus was explored, which was expanded over the side of the pregnant or right uterus, and its cavity was fully six inches in length. The os of each uterus was very rigid and so closely contracted that it would barely admit the tip of the index finger, notwithstanding the use of the ordinary means to induce dilatation of the rigid os—such as pressure with the fingers previously covered with the ext. belladonnæ, inhalations of chloroform, and the use of opiates. It was not until the sixth day that dilatation commenced, the pains continuing regular and quite severe all the time.

Dr. W. H. Byford was called in consultation with Dr. Skeer and myself, and pronounced it a perfect case of

double uterus and vagina. As the patient's strength remained comparatively good, he advised non-interference.

The presentation of the child from the first was normal, but as soon as dilatation had commenced I thought to hasten labor by turning, and as the membranes had not yet been ruptured, this was accomplished by external manipulation without the least difficulty, and the membranes ruptured. The breech then, under the influence of vigorous uterine contractions, descended rapidly, forcibly dilating the os, and at the same time rupturing the upper end of the vaginal septum, which afforded ample room for the passage of the child. Labor now progressed rapidly, and before I was aware of it, there was a foot of the child protruding through the rent into the left vagina. I found it impossible to return it, without completely rupturing the vaginal septum; but, without delay or difficulty, I succeeded in bringing down the other foot through the same orifice, and the labor, which was 138 hours in duration, was very soon terminated, leaving about two inches of the outer end of the vaginal septum unruptured.

The patient made a very rapid and perfect recovery, and in two months from her confinement visited my office. I made an examination of her genital organs, and by passing a sound into each uterus at the same time, I could demonstrate to my entire satisfaction, that the deformity was symmetrical, both uteri being of equal size, and that the rupture in the septum was closed and perfectly healed.

THE MICROSCOPE IN DAILY PRACTICE.

(SECOND PAPER.)

BY I. N. DANFORTH, M.D.,

LECTURER ON PATHOLOGY IN RUSH MEDICAL COLLEGE, CHICAGO.

It seems to be generally believed by physicians and students that a good microscope must necessarily be a very costly affair; hence the majority of those who ought to possess microscopes are "waiting" till they are rich enough to afford it. Now a microscope is one of the instruments that the student should purchase first; it should be the constant companion of his student-days, so that when he commences practice he shall be as familiar with medical microscopy as he is with any other means of diagnosis or scientific research. It is a poor time to study practical microscopy when the physician finds himself involved in a busy practice, but most of us can find time enough in our earlier years to at least make ourselves quite successful *amateurs*.

Until within a few years past a good microscope at a reasonable cost was a thing almost unknown. During the last decade, however, several of our best makers have, with the aid of practical microscopists, placed within our reach instruments of excellent quality and comparatively low price.

Through the courtesy of Mr. J. G. Langguth, the well-known optician of this city, I am able to present illustrations of two very excellent physicians' microscopes, either of which will furnish every requisite for ordinary diagnostic purposes, or pathological research.

Fig. 1 represents the students' microscope, manufactured by Mr. R. B. Tolles, of Boston. This is one of the best low-priced instruments ever offered. Some years ago, Mr. Tolles conceived the idea of furnishing a good instrument at a low price, and in order to successfully carry out his scheme, he sought the advice of several practical microscopists of Boston and vicinity, notably

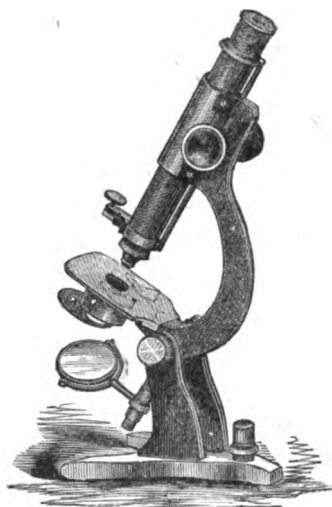


Fig. 1.

Professors Oliver Wendell Holmes and the late Jeffries Wyman. The result of their deliberations and experiments was the beautiful instrument of which the accompanying wood-cut is a very correct illustration. The base, upright and curved arm, are of iron, handsomely japanned; the body of the instrument is nickel-plated, and is fixed to the curved arm by a trunnion joint, by means of which it can be placed in any position from vertical to horizontal; it is

furnished with a B eye-piece, an inch, and a quarter inch objective, the former giving about 80 and the latter about 350 diameters; plain (that is, fixed) stage, revolving diaphragm, and concave and plane mirrors. For the illumination of opaque objects, the mirror is removed to an upright stand. Coarse adjustment is effected by a rack and pinion movement, fine adjustment by a very fine screw and movable plate on the stage, which is sufficiently delicate for very high powers.

The price of this instrument, complete, together with a walnut case, is seventy dollars. To say that it is made by Mr. Tolles is a sufficient guarantee for its excellence.

Fig. 2 represents the new students' microscope, designed and manufactured by Mr. Joseph Zentmeyer, of Philadelphia, a gentleman long and favorably known to microscopists all over the world. This instrument bears a striking resemblance to many of those manufactured in Europe. It is mounted on a polished mahogany base, made to exactly fit the case, thus rendering all further packing unnecessary. It is capable of assuming any

position from vertical to horizontal; the body of the instrument is rather short, but is capable of elongation by means of a draw tube. The stage is of glass, and is freely movable in all directions; below the stage is an

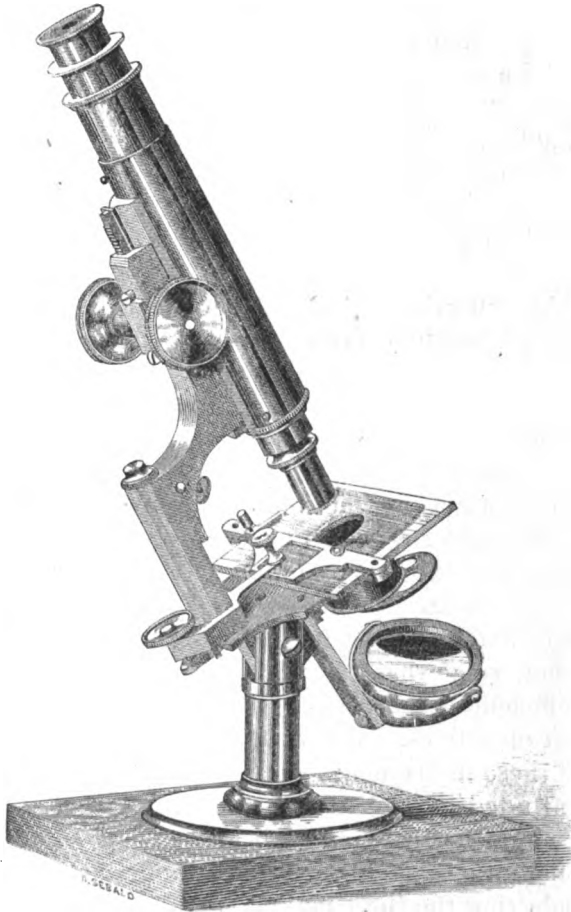


Fig. 2.

attachment for accessories, to which is fixed a revolving diaphragm, and below this attachment, two mirrors, plane and concave, so arranged as to allow free lateral movement—coarse adjustment by rack and pinion, which moves the body alone; fine adjustment by a fine mi-

crometer screw acting on a lever which moves both the supporting arm and the body. The perforation in the bar is for the stem of the illuminating lens or "bull's-eye." Accompanying this instrument is a B eye-piece, an eight-tenths inch objective magnifying about 80 diameters, a fifth inch objective magnifying about 450 diameters, and a bull's-eye.

This outfit, packed in a mahogany case, can be obtained for \$85.00. I used one of Mr. Zentmeyer's hospital microscopes for several years, and found it every way satisfactory. His instruments, however, need no words of commendation from me; like Tolles', they stand on their own merits.

In this connection I desire also to mention the students' microscope recently gotten up by Mr. W. H. Bulloch, of this city. Mr. Bulloch is very favorably known in Chicago as a workman both skillful and conscientious. I have now one of his large binocular instruments, which I have constantly used for four years past, and it has given me perfect satisfaction. His students' microscopes are of two patterns: one, exceedingly simple in its construction, but, after all, combining everything necessary for the physician's purposes, which is sold, (including eye-piece and case), for forty dollars, *without objectives*; the other, somewhat more complicated, but perhaps no more efficient, costs sixty-five dollars, with eye-piece, but without objectives. When furnished with objectives the cost of these instruments would not vary materially from those alluded to, and illustrated above; and I may add, there would be little choice between them so far as the general wants of the physician are concerned.

In selecting the three makers mentioned, I by no means intend to discriminate against others, perhaps equally good in every respect; but in the first place, in order to render this paper of any practical value to the readers of the JOURNAL AND EXAMINER in the selection of microscopes, it is necessary to recommend the productions of *somebody*; and in the next place, it is but right and natural

that I should select the instruments of those makers with whom I am best acquainted.

With either of the three instruments above mentioned, the practicing physician ought to be able to do all things requisite for diagnostic purposes, and also to work successfully in whatever department of scientific investigation he may choose to labor.

The habit of buying costly microscopes has become far too general here in this country, and notably in this city. It is an evil that ought to be remedied, because it confines the microscope to the hands of the few, whereas it ought to be in the hands of every physician. I am told that in the most celebrated physiological laboratories of Europe the work is mainly done with small, cheap instruments, and that the majestic and gorgeous instruments of American makers are almost unknown. Especially is this true as regards Germany, where the most painstaking and accurate histological work is done.

A large, costly and complicated microscope is an actual hindrance, rather than a help. In the first place, not many physicians are able to purchase a costly instrument before middle life, and by that time the "fingers are all thumbs," so that delicate manipulations are difficult if not impossible; and most of us begin to get weak in the eyes by the time we reach middle life, so that we cannot sit down to steady histological work. In the next place, a large, heavy, complicated microscope is an unwieldy thing to manage; it takes too much time to get it ready for use, and is, therefore, rather more than likely to go unused. Again, so complicated and delicate a machine is too much in danger of getting out of order for everyday use, and if repairs are needed, it necessitates packing the instrument, and sending it away, sometimes for a long distance, which means loss of time, provoking delays, and outlay of money.

Lastly, unless one is pretty constantly in the practice of microscopy, the results obtained with the more elaborate instruments are far less satisfactory than with the

simpler forms which are more easily managed. The ideal physicians' microscope is one that is not discouragingly costly ; one that can be easily handled, rapidly and accurately adjusted, and one that can be quickly put in its place when the work in hand is done. Either of the instruments described in this paper come very near the realization of that ideal, combining as they do cheapness, simplicity and the greatest utility.

(To be continued)

Reports of Societies.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, Aug. 16, 1875.

(Reported by D. C. STILLIANS, M.D.)

Rosa A. Engert, M.D., reported a case of a patient affected with menorrhagia of two or three weeks duration, alternating with intervals, lasting for six or eight weeks, this general condition having existed during the past winter, with severe exacerbations, and no entire relief. The patient was fifty-three years of age, and attributed her disorder to the menopause.

A friable mucous polypoid growth, as large as a plum, was found protruding from the os uteri—the uterus itself being enlarged to the extent of a four months pregnancy. After the removal of the tumor, the wound was cauterized, but, the hæmorrhage continuing, it was found impossible to explore the uterine cavity with the sound. Dilatation of the cervix was effected by the aid of a tent, when the obstruction was found to be occasioned by a soft and spongy mass lying close to the internal os, and easily detected by digital examination. A tampon saturated with a styptic solution was placed in the vagina, when uterine contractions ensued,

with increased hæmorrhage as the os dilated, and partial expulsion of the uterine contents. The latter were found to consist of a conglomerate of hyaline cysts, varying in size from a millet seed to a whortleberry, imbedded in a delicate vascular tissue of white stroma. The entire mass was as large as an orange, and was inserted by a pedicle, an inch long and half an inch in width, to the right antero-lateral uterine wall. By the aid of the finger-nails and the curette, the portion of the uterine wall upon which it had been implanted was scraped till the muscular fibres were exposed, when the cavity was syringed with tepid water, and swabbed with dilute solution of acetic acid. Subsequently nitric acid was applied. The morbid growth was evidently a non-malignant uterine papilloma, and its removal was followed by restoration to health.

The reader also reported a case of sarcoma, resulting in well marked encephaloid disease:—

A hard-working woman, 46 years of age, widowed for six years, and having one child born after the death of her husband, had menorrhagia and copious leucorrhœa for one year and a half, the former for six consecutive months. Her strength gradually failed, till she became confined to her bed. She had previously suffered from some ocular disorder, which, under homœopathic treatment, resulted in amaurosis. During this time also, she had exhibited a cutaneous exanthem with high fever. A second homœopathic physician had predicated the existence of cancer of the womb.

The upper part of the vagina was found filled with a friable colloid mass, readily bleeding when touched. A portion, under examination, seemed destitute of structure, and was thought to be sarcomatous.

The patient was at this time in a cachectic condition, with severe and constant cephalalgia, pain in the back and loins, anorexia, asomnia, chills and fever, followed by diaphoresis, dysuria and constipation. Pulse 120 per minute. There was considerable prostration, with

subsultus, and dizziness on assuming the upright position; though she fancied there was slight restoration of vision.

The patient was given beef and eggs, brandy, strychnia, iron, phosphorus and cinchona, until there was improvement in her general condition. Then the accessible portions of the neoplasm were removed, when it was evident that the remnant filled the uterine cavity, with consequent and marked invasion of the tissue of the parietes.

The entire mass was removed by the curette—very rapidly in consequence of the hæmorrhage—when but a narrow border of sound tissue was found remaining. Near the line of junction of the canal of the cervix and the cavity of the uterus, a velvety patch was left unmolested, lest the thinned anterior wall should be perforated in an effort to remove it. The entire uterine cavity was then cauterized with the nitrate of silver.

During the two succeeding days, there was considerable reaction, the pulse rising to 130 per minute, and even more at times, when it was difficult to estimate its rapidity. Diffusible stimulants, with beef tea and opium, were freely administered, and a solution of the permanganate of potash employed locally.

Between five and eight days thereafter, there was a complete amelioration of all symptoms, the pulse falling to 100, and the hæmorrhage entirely ceasing. Menstruation soon recurred at regular intervals, with a slight serous discharge from the womb succeeding each epoch.

Within ten months, a relatively larger growth was found rapidly developing in the same locality. The cells of the latter, on examination, were found to be more numerous and larger than in the first instance. Some of the clusters bore unmistakable resemblance to cancer cylinders.

A *second* operation was refused; the patient complaining merely of slight dysuria, relieved by warm baths and

anodynes. Somewhat later, there was exacerbation of pain, delirium, vomiting and death.

The reader was of opinion that an earlier resort to treatment might have secured permanent relief.

Dr. Adolphus concurred in the opinion expressed by the essayist, but stated that hæmorrhage after abortion was not always caused by the presence of a foreign body in the uterus. A lady, under his treatment, aborted at three and a half months, and the secundines were carefully removed—the ordinary discharge continuing about ten days. Her menses appeared at the usual time, and lasted ten days. He found, upon examination, that the uterus was in a normal position, not painful, three and a half inches deep, and that there was ulceration of the cervix. He applied sat. sol. ferri persulphate to the cavity, at intervals of four or five days. The general condition of the patient improved. The menses reappeared and lasted eleven days. He dilated the cervix with sponge tents, and examined the cavity of the uterus thoroughly without finding any foreign body. The lady has had leucorrhœa for several years, and the menorrhagia was doubtless caused by chronic disease. He habitually used, in gynecological practice, the concentrated preparations, introducing them on cotton by means of the applicator, and allowing them to remain till they were expelled.

Dr. Bartlett apprehended some difficulty in reaching the fundus uteri with the index finger, and thought it necessary to introduce half the hand, in order to explore the cavity thoroughly.

Dr. Adolphus. "I can reach the fundus with the index finger by bi-manual palpation in two-thirds of my cases, and in those, where owing to tenderness of the parts, great obesity, or dropsical effusions, I am not able to depress the uterus sufficiently, the use of ether enables me to do so, and explore the cavity with my finger."

Dr. Paoli thought the use of the sat. sol. of perchloride or persulphate of iron, dangerous, producing severe

inflammation. Several fatal cases have been reported from their use. Hæmorrhage after abortion, without the presence of a foreign body, is not unusual.

Dr. Engert used these preparations very much diluted, and applied them with a swab of sponge or cotton, to the uterine cavity.

Dr. Quine said that he was constantly using, in the treatment of uterine diseases, the remedies mentioned by Dr. A., which comprised some very active irritants, and escharotics; but notwithstanding this, he held, with Dr. Paoli, that in the cases in which the perchloride and persulphate of iron were employed, and recommended by the essayist, they *were* dangerous—not because they were violently irritating, but because they favored the occurrence of septicæmia by causing the uterus to be filled with blood clots, which were liable to decomposition. Moreover, he had very little confidence in the hemostatic virtues of any mere astringent, locally used, unaided by mechanical agencies. He was generally able to reach the fundus uteri with the finger without introducing the whole hand into the vagina, when the cervix was sufficiently dilated.

Dr. Clark said his views were changing in regard to the use of the preparations just mentioned. He had lately seen three cases of pelvic cellulitis, caused by their use. As in a case lately brought to his notice, where the application was followed by a chill, fever, tenderness over abdomen, long hectic, and a tumor on one side of the pelvic cavity, from which a large quantity of pus was removed.

Dr. Stevenson said that possibly in those cases metrorrhagia where no foreign body was found in the uterus, the result could be explained on "The new basis of Pathology," offered by Prof. King, in the August number of the *Am. Jour. of Obstetrics*.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS

Regular Meeting, Aug. 23, 1875.

(Reported by E. WARREN SAWYER, M.D.)

President, Dr. Bevan, in the chair.

The Society listened with great interest to an exhaustive paper on the etiology, pathology and treatment of the intestinal affections of children, by Prof. N. S. Davis.

In the discussion of Dr. Davis's paper, Dr. Paoli remarked that he used vegetable astringents, and especially quinine, with great circumspection in children, because of the danger of inducing cerebral hyperæmia. He extolled, with Dr. Davis, the use of the mineral acids, and spoke of the efficacy of port wine.

Dr. Bartlett remarked, that in relying upon the temperature record, given by the Signal Service Bureau, it is important to remember that this record is taken at an altitude of from fifty to seventy feet, and that the temperature at that height is, at least, ten degrees lower than that upon the earth; he gave several examples of disparity between the temperature low down and that reported by the signal service.

Dr. Hamill remarked that there must be some other exciting cause of the bowel troubles of children beside heat; if not, why are these diseases confined almost exclusively to populous districts?

Dr. Hyde asked to respond to Dr. Hamill. There is another cause than heat, else the children in the South, and in Africa, would be especially prone to bowel troubles which, by no means, is the case. Heat probably arouses other causes. In this connection it is interesting to refer to a series of tables made in this city not long since, showing that in each ward of the city the infant mortality from bowel affections was in direct ratio to the extent of sewerage possessed by that ward; the ward most imperfectly drained, had the greatest mortality. It is important, too, to examine into the supposed miasmatic

origin of these bowel affections ; a medical gentleman, of extended observation, had told him that in San Francisco he regarded the bowel troubles of children as wholly of miasmatic origin, and gave quinine freely in these cases. Practitioners on the continent are less apprehensive concerning the bowel affections of children than we are, and they exhibit almost a fear in the administration of quinine.

Dr. Davis remarked that we may yet learn that, besides the continuous heat, there are other important atmospheric conditions that bear directly upon the causation of the bowel troubles of children ; thus, still air, little winds, or the degree of moisture. He did not regard these affections as of malarial origin ; if this were true, then there would be a relation between the bowel affections and the presence of malaria ; the bowel troubles would be most common when malarial affections are most common, which is not the case. He thought the statement, that cholera infantum was a disease of populous districts, would not hold good ; it is found everywhere.

Dr. Simon confirmed the statement of Dr. Hyde, respecting the use of quinine in Paris, and said that it was almost never given there to children. The successful results in infant bowel troubles, in Paris, could be attributed, first, to the free use of alcoholic stimulants ; second, to the administration of raw meat, given in pills at short intervals.

Dr. Fisher read to the Society the report of a case of dislocation of the hip, which was reduced by manipulation sixteen days afterward. The patient was a little girl who lived in Iowa. She jumped from the height of three feet, and fell ; she was picked up vomiting, and could not stand. Medical attendance was summoned, and the lesion was treated for rheumatism. Another attendant prescribed a liniment for a supposed hip disease. Dr. Fisher asked to have the girl brought to this city, and he saw her sixteen days after the injury. It

had the typical characteristics of a dislocation of the head of the femur upon the dorsum ilii; shortening of the extremity; great toe of the injured side crossing the opposite instep, and finally the head of the femur was felt upon the dorsum of the ilium. Dr. Hyde saw the patient, and at once confirmed the diagnosis. The patient was etherized by Dr. Hyde, when Dr. Fisher, by Reid's method of manipulation, returned the dislocated head of the femur to its socket so easily and noiselessly, that he hardly knew when it was reduced.

Dr. Fisher remarked that this was the third instance in which he had reduced a dislocated hip by Reid's method, and always with the utmost facility.

Summary of Progress in the Medical Sciences.

I. OBSTETRICS.

1. *Hæmorrhagic Cerebral Tumor—Epilepsy—Post-Mortem Cesarean Section.*
PINARD. (*Le Progrès Medical*, July 10, 1875.)

The author reports the case of a primipara, 22 years of age; plunged in profound prostration, half somnolent, with closed eyes; unable to give coherent answers to questions; sensibility was intact; motility, normal on the right side, and enfeebled in both the upper and lower left extremities. The tongue was projected to the left; pupils widely dilated; no strabismus, nor irregularity of nostrils or eyelids. Integument pallid; some embonpoint; abdomen distended as in pregnancy between sixth and seventh month. Fœtus active, with heart sounds distinct in left hypogastrium; cervix uteri of due length; quite flaccid, and having closed orifice. No sugar nor albumen detected in a scanty, lemon-colored urine. Respirations regular, slightly stertorous—twenty-four to the minute; pulse 80; axillary temperature, 37.2° C.

The very exceptional absence of albumen in the urine, and the character of the repeated epileptic seizures which soon followed, led to the diagnosis of a cerebral tumor. The convulsions rapidly increased in frequency, from one or two in the day, until the last hours of the patient were passed in one convulsive spasm, accompanied by incontinence of urine and fæces, and followed by coma and death. Pulsations of the foetal heart being then audible, Dr. Pinard performed Cæsarean section; and extracted a child apparently moribund, but whose heart continued to beat regularly. Respiration followed after insufflation for fifteen minutes. The child, however, did not survive more than three hours.

Post-mortem examination of the mother disclosed scirrhus induration of a voluminous pineal gland, with disappearance of the posterior apophyses of the sella turcica. All the ventricles were more or less distended with sero-sanguinolent fluid. The right lateral ventricle contained also clots—together, forming a mass as large as an orange—while a mamelonated tumor projected from its lateral and superior wall. There was considerable softening of the adjacent cerebral substance. A second smaller and similar tumor was also found in the lateral ventricle.

These tumors were found to contain blood, enveloped in a laminated membrane, whose lamellæ became finer from periphery to centre. The latter were found to be made up of a delicate vascular stroma, best organized in the vicinity of the clot, and having, at certain points, undergone fatty degeneration.

The points of interest in this case were, the differential diagnosis between puerperal eclampsia and the influence of a cerebral tumor; the persistence of foetal life, with rhythmic and forcible pulsations of the heart during a long series of epileptic convulsions; and the complete post-mortem contraction of the uterus after the removal of its contents. The judicious obstetrician of the *Maternité* had operated precisely as if the woman were living,

and when he exhibited the womb and its appendages to the school of midwives connected with the hospital, he was enabled to call their attention to the form and volume of the organ, which did not differ from that of a woman delivered in the natural method.

2. *Vesical Ecchymoses in the Newly Born.* PARROT. (*Le Progres Medic.*, June 10.)

The reporter exhibited before the Anatomical Society some pathological specimens removed from the body of a newly born child who had presented symptoms of that form of œdema, improperly designated scleremia. It had suffered from the kind of black vomit often observed in cancerous cases. There were, post-mortem, evidences of ecchymatic, non-ulcerative erosions in the œsophagus and stomach and upon the surface of the kidneys, as well as within the intestines (particularly the rectum). But especial attention was called to those in the bladder, which were rather small tumors, as large as grape seeds, produced by submucous hæmorrhages.

The reporter estimated that these vesical ecchymoses, of greater or less projection, were to be found in seven or eight of every ten cases of œdema of the newly born.

3. *Influence of the Nervous System upon Phenomena of Pregnancy and Parturition.* GOLTZ and FREUSBURG. (*Archiv. fur Phys.*, ix. 1874.)
Note by Fritsch. (*Jahrbücher* 1875; *Phil. Med. Times.*)

Section of spinal medulla and left sciatic nerve in a bitch, nine months old, was succeeded by recovery (excepting the paralysis) and increase in weight. Pregnancy occurred in four months, with birth of strong living pup, cleaned by licking. The placenta was devoured. Two others, dead-born, were similarly treated. Rhythmical flexion and extension of posterior extremities were co-ordinate with labor pains. There was also contraction of intra-pelvic muscles, and uncontracted vagina. Peritonitis and death resulted from vaginal perforation. Segments of the medulla were found one centimetre separate—the lower of normal size.

Fritsch considered that the integrity of the ovaries, explained the going into heat, at which time the male, previously refused, was accepted. Presence or absence of ovaries, therefore, affected the brain centres ; and the sympathetic fibres must have joined the cord above the site of section (lumbar region). It is probable that, during heat, characteristic matters enter the blood and thus act upon the brain. Impregnation without sensation is possible, since women conceive when stunned. The development of distant organs often depends upon presence of essential genitalia. Körner asserts the medullary origin of uterine motor fibres about the last dorsal vertebra. Thence they descend along the aorta. These, in the experiment, would have been uninjured. Probably the entire parturient act does not depend upon the brain, as other fibres originate about the third or fourth lumbar vertebræ. In this case, action of the external muscles could not have originated in impulses from the brain, but from a nervous centre in the lumbar region of the cord. This centre may extend over the whole cord, so that, when divided, each segment may be influential so long as there is integrity of centrifugal fibres. The third and fourth cervical vertebræ were fractured in a primipara, aged 24, between the sixth and seventh month of pregnancy, with consequent paralysis of sensation and motion below seat of injury, but labor-pains, unfelt by her, still expelled a dead-born child. This case also tends to show the existence of an independent centre in the cord.

4. *Report of the Board of Health of the City and Port of Philadelphia for the Year 1874.*

This exceedingly valuable Report, under the head of Births, gives some interesting statistics, with deductions of scientific import. The birth rate to 1,000 living persons, was, in the United States, (1870), 28.86 ; England, (1861—1870), 35.2 ; France, (1861—1870), 26.2 ; Prussia, (1861—1870), 39.6 ; Austria, (1861—1870), 39.8 ; New

York, (1874), 24.46 ; Philadelphia, (1870—1873,) 24.88 ; Chicago, (1874), 22.87 ; Boston, (1874), 31.18. Imperfect registration laws and returns account, probably, for some of the differences.

From 1861 to 1873, 100 males were born alive to 109.4 females ; and 100 of the former to 136.5 of the latter, dead born. In 1874 the corresponding figures were, 100 to 110.7, and 100 to 135.

During the past fourteen years, the births in Philadelphia were quite evenly distributed in the different months, with the exception of April, May and June. The decrease in these months is attributed to influences operating in the preceding summer and in the commencement of autumn.

Dr. Emerson obtained similar results from examination of the birth statistics in Philadelphia for the ten years 1821—1830. Dr. Villermé, of Paris, who has collected and analyzed a very large number of births, calls attention to a decrease in the birth rate during these same months. Both writers attribute these results to the influence of the seasons upon conception.

From 1861 to 1874, the greatest number of *conceptions* occurred in April ; then, in January, March, December and November ; the least number in July ; next, August, September and May. Almost without exception, the coldest months were the most prolific, and the warmest the least so. In Montpellier, France, February was the most prolific month of the year ; then followed in order, April, May, March and January. The smallest number of conceptions took place in September ; next in August, and then in July and October. In both places the most unfavorable months for reproduction were the same, viz. : July, August and September, though in Philadelphia the order by months is reversed.

Milne is of opinion that if the disturbing element of marriage were as accurately regulated as that of births, the influence of the seasons upon conception would be still more manifest, and that then the maximum of conceptions would be found to occur in midsummer.

Baker, of Michigan, from his statistics, deduces : "1. That the uniform proportion of births by seasons, is, in the majority of months, influenced by the number of marriages. 2. That, for the reason that the excess or deficit in the number of births, compared with the average number, is larger than the excess or deficit of marriages for the months in which the conceptions occurred, compared with the average number of marriages, it would appear that the marriage-rate is not, to say the least, the only cause of the uniform excess or deficiency of births at different seasons of the year. 3. Taking the two foregoing propositions together, it seems that both the marriage and birth-rate are, to some extent, dependent upon the same cause, which, although not manifest here, it is altogether probable is a physiological one, and directly connected with climate or seasons of the year."*

In Philadelphia, from the statistics for thirteen years, (1862—1874), it appears that of the seven months in which more than an average number of conceptions occurred, there were four months having more than an average number of marriages; but, in the remaining five months, having less than an average number of conceptions, there were four months having less than an average number of marriages.

5. *Hydrate of Chloral in Obstetric Practice.* CHARLEONI. (*Gazet. Med. Ital. Lomb.; Brit. Med. and Surg. Jour.*, Aug. 19.)

The usual formula was: six grammes of chloral, sixty of syrup, and one hundred of water. A spoonful of this was given till the desired effect was produced, except when larger doses were necessary, when four grammes of chloral were divided into two enemata, given with an hour's interval.

There were four classes of patients: 1st. Irritable, hysterical, nervous or apprehensive (primiparous) women, with feeble, interrupted and ineffectual pains. Result: effectual uterine contraction, sleep, diminution of pain,

* Fourth Registration Report, Michigan.

and shortening of period of labor. 2nd. Patients with albuminuria, the remedy preventing convulsive action. 3rd. Cases in which the drug was administered to render operations easy and less painful. In the greater number of cases, however, the chloral was given after the termination of labor, to promote rest or sleep.

These experiments indicated that the treatment did not tend to retard the progress of labor or injure the child.

In from one to five or more hours after exhibition of the remedy, according to the dose and the peculiar circumstances of the case, the desired results had been accomplished. Occasionally talkativeness and hilarity were induced.

6. *Procedure in Right Occipito-posterior Position.* PROF. F. BARKER. (*Med. Record*, June 19.)

The Professor at first attempted to rotate the occiput into the anterior position through the vagina, but was foiled in this, as the occiput would rotate back into the hollow of the sacrum, as soon as the hand was removed. The woman was then carried profoundly under the influence of chloroform, the left hand introduced, and, with a great deal of effort, the head was pushed up out of the pelvic cavity. Then, with the right hand upon the abdomen, rotation of the trunk was effected, so that the occiput was brought around. Then the head was pressed under the symphysis pubis, and delivery of a living child accomplished without perineal rupture. He was quite sure that by this operation he saved the perineum and also the life of the child.

7. *Gastro-Elytrotomy.* THOMAS. (*Am. Jour. of Obstetrics*, Aug., 1875.)

In the case of a woman, moribund and near the end of pregnancy, the reporter, instead of performing Cæsarean section, made an incision in the inguinal region parallel to Poupart's ligament, down to the peritoneum. He then pushed up the vagina with the sound, cut down upon it, and enlarged the opening with the scissors. The hand was then passed through the large incision into the cervix,

which had been dilated with Barnes' dilator. The feet of the child were seized, version was performed, and the child extracted alive—the latter surviving the operation for several days, dying eventually from causes unconnected with the operation. The woman was pulseless, and died in four hours. The time occupied in performing the operation was short—not longer than that required for Cæsarean section. The reporter believed he could perform the operation and deliver the child in five minutes. He would not always prefer this method to Cæsarean section, and was fully aware of the incidental danger of cellulitis, septic infection and hæmorrhage, especially in the vascular condition of the vagina during pregnancy. But he was inclined to think the operation had a future. So far as he was aware, but one operation of the kind had since been performed—that by Dr. Skene, of Brooklyn. The child had been previously perforated and the woman exhausted. Death occurred in seven hours. He thought that drainage through the vagina would diminish the chances of septicæmia. From the description of the operation it would appear to be a difficult one; but, in point of fact, it is surprisingly easy in every detail.

8. *Vicarious Menstruation.* DR. J. N. UPTHUR, Richmond, Va. (*Virginia Med. Monthly*, Sept., 1875.)

The case reported was a woman 18 years old, who commenced menstruating at 13 and continued it 2 years regularly thereafter. Periods attended with pain. "For past 3 years has suffered from amenorrhœa, but for the past 10 months, has had, every 4 weeks, a vicarious discharge of blood from the stomach, attended by cough, nausea, hæmatemesis, rachialgia, tympanitis and sense of weight at hypogastrium." Under iron, strychnine and ergot she soon menstruated normally.

II. SURGERY, OPHTHALMOLOGY AND OTOTOLOGY.

1. *Plugging the Nasal Cavities.* J. ENGLISH. (*Centralblatt, f. Chir.*, No. 34, 1875.)

The writer enumerates all the external and internal remedies that have ever been used against nose-bleeding and shows how, after all, Bellocq's tube had always to be resorted to as the surest method of plugging the nasal cavity. But it is not unobjectionable, because of the annoying salivation produced by the thread which is carried out through the mouth. This objection is obviated by using a rubber bag attached to a flexible rubber tube; introduced through the nostril into the nasopharyngeal cavity, the rubber tampon is filled with water and then drawn up tightly into the posterior nares. A clamp attached to the rubber tube prevents the escape of the water.

Dr. T. H. Jewett describes (*Philadelphia Med. and Surg. Reporter*, Sept. 11), the following simple plug in nasal hæmorrhage: "Roll up a lock of cotton into a cylinder an inch or an inch and a half in length; tie a strong thread to the middle of the roll; bring the two ends of the roll together, and then opening the nasal orifice pass the middle or folded part of the roll into the nostril; next, with the blunt end of a lead pencil press in the cotton roll slowly, along the floor of the nose, one inch or more, and rest. If the blood passes down into the throat, you may be sure the bleeding spot is behind the roll, so push in your roll further and the blood will cease to pass behind. Then, holding on to the string, pass some loose cotton into the nostril and push it down to the plug. The cotton will swell with the moisture and arrest the hæmorrhage. In a day or two the natural secretions of the nasal surfaces will loosen the plug and it may be easily removed by the string.

2. *Tannic Acid for Acute Conjunctivitis.* E. EMMERT. (*Aug. Med. Central Zeitung*, No. 64, 1875.)

For severe conjunctivitis, in scrofulous children, with

much swelling of the eyelids, intolerance of light and muco-watery secretion, a solution of tannic acid (3 ss to ʒj) instilled into the eyes every two hours, acted more efficiently and arrested the inflammation more promptly than any other remedy. In cases of blennorrhœal and gonorrhœal conjunctivitis the tannic acid accomplished just as much as arg. nitr., and the doctor is in favor of tannic acid, because it can be given to the patients to be used at home, which we can never do with the arg. nitr.; in country practice, therefore, he thinks the tannic acid will be greatly used for the above diseases.

[Tannic acid was a favorite remedy at the County Hospital under Dr. Hildreth; he used a saturated solution of tannic acid in glycerine and bromide of ammonia. But a blennorrhœal eye requires the daily attendance of the physician, just as much as a case of typhoid fever, and then arg. nitr. can be used just as well.—ED.]

3. *Transplantation of the Conjunctiva.* O. BECKER. (*Wiener Med. Wochenschrift.*)

Prof. Otto Becker reports two cases of adhesion of the eyelid to the globe, in which, after failing with other operations, he obtained a satisfactory result from the above transplantations. He carefully dissected the lid from the globe and implanted into the defect of the ocular conjunctiva a piece of conjunctiva just removed from a white rabbit, and secured it in its new place by four sutures. For the sutures very fine and strongly curved needles and the finest untwisted white silk were used. In one case, the whole implanted piece healed in; in the second case, only about one-third of the flap became adherent, but still the result as to the mobility of the eye was satisfactory.

4. *Grave's Disease.* R. BARTHOLOW. (*Chic. Jour. Nerv. Dis.*, July, 1875.)

Before the American Med. Association, Robert Bartholow, M.D., read an interesting paper on exophthalmic goitre. Sustaining the theory that this disease is a

purely functional disorder of the sympathetic nerve, he gives the detailed history of three cases which were materially benefited by a regular course of treatment with the galvanic current. The negative pole was placed on the epigastrium, and the positive was so applied as to include the cervical sympathetic, the pneumogastric and the cilio-spinal region within the circuit. The *seances* were ten minutes in duration.

5. *Elastic Ligature for the cure of webbed fingers.* VOGEL. (*Am. Jour. Med. Sci.*, July, 1875.)

Dr. M. Vogel tried this treatment with a great deal of success in a very bad case of webbed fingers. The first rubber thread was entered just above the last phalanx and tied over the tip of the united fingers, care being taken that it occupied an exactly intermediate position between them. After eight days the phalanges were completely separated. The necessary tightening of the ligature was done from time to time by placing a small roll of plaster under it. When the fingers were completely separated by this process they were fixed on a pasteboard splint, while, to prevent the re-formation of a web at the junction of the fingers, an elastic thread was attached to a wristband and gently stretched between them. Cicatrization went on rapidly, and after a few weeks the fingers had regained a natural appearance.

Another case of webbed fingers treated successfully by the elastic ligature, is reported by Prof. Dittell.—*Philad. Med. and Surg. Reporter*.

6. *Strangulated Hernia reduced by taxis through colon.* A. HADDEN. (*N. Y. Med. Record*, July 24.)

Alex. Hadden (New York) relates a case of strangulated direct inguinal hernia which, after failing with other methods, he reduced by taxis through the colon in this way:

“The patient being fully under the influence of chloroform, was placed on her chest and knees, and sup-

ported in that position; I next introduced my fingers into the anus, and passed my hand by gentle pressure up into the colon. I had some difficulty in following the intestine over the promontory of the sacrum, but when my hand had passed this point it was very free. I could feel the engorged intestine plainly, and could make traction on it with my fingers, and did carefully, fearing that I might rend it. My manipulations consisted, chiefly, in gently rubbing my finger along the intestine from the inner surface of the ring, and using external taxis with my other hand at the same time. The desired result was accomplished in about ten or fifteen minutes with comparative ease."

7. *Treatment of Strangulated Hernia by Subcutaneous Dilation.* H. R. ALLEN. (*Philad. Med. and Surg. Reporter*, July 10, 1875.)

This practice was advised by Sentin in 1856, and again by M. Langenbeck in 1864, but it never could gain any prominence in surgery. Now Dr. H. R. Allen (San-Francisco, Cal.,) reports a few cases of severe strangulation which he and other physicians failed to relieve by the ordinary taxis, and which he then speedily released by introducing his index finger forcibly into the ring and distending it subcutaneously. Upon his experience in these cases he devised an instrument for the forcible dilatation or subcutaneous laceration of the stricture. For a full description of this instrument, see *Reporter*.

8. *Simon's Method of Dilating the Female Urethra.* P. BRUNS. (*Centralblatt, d. Chir.* 33.)

Prof. Simon (Heidelberg) published, a short time ago, a method of quickly and safely dilating the female urethra for the purpose of examining the bladder with specula as well as the finger. In the first place the external orifice of the urethra is enlarged by two lateral incisions (one-eighth of an inch deep); then the urethra itself is dilated by the introduction of a series of seven conical specula of hard rubber, the No. 1 has a diameter of one-quarter of an inch, and No. 7 measures one and

one-quarter inches. Directly after withdrawing the largest speculum the index finger is introduced for palpating the interior of the bladder. According to S. even the narrowest urethra can thus be dilated within a few minutes; he has made use of his method in over sixty cases, and an incontinence of the bladder has not been experienced in a single one.

To illustrate the great usefulness of Simon's method, Dr. Bruns gives the following case: A girl, 24 years of age, had a hair pin in her bladder, and three unsuccessful attempts at extraction had been made. In the narcosis the external orifice of the urethra was enlarged by two superficial cuts, and the seven specula were introduced successively. The index finger then followed, and with it a thin forceps could be introduced into the bladder. Under the guide of the finger the hair pin was caught up without difficulty and extracted. The whole operation occupied five minutes. No incontinence of urine after the operation.

9. *The Aspirator in Cases of Retention of Urine.* P. I. CONNER. (*Cincinnati Clinic*, July 10.)

P. I. Conner read a paper on this subject before the Ohio State Medical Society. Whenever by a tight stricture, hypertrophy of the prostate, or other causes, the distended bladder cannot be emptied by catheterization, he recommends the tapping of the bladder through the supra-pubic space by the needle of the aspirator. The method is certain, easy, quick and safe, and attended by very little pain. He has tapped and emptied the bladder by aspiration as often as ten times within two weeks without any unpleasant consequences.

10. *Extirpation of a Tumor of the Bladder.* BILLROTH. (*Boston Med. and Surg. Reporter*, July 10.)

On June 3, 1874, a boy, æt. 12, was admitted to Prof. Billroth's clinic. He exhibited such symptoms as are known to be caused by a stone in the bladder. But on examination, a tumor about the size of a fist, evidently attached to the wall of the bladder, could be felt through

the abdominal wall as well as per rectum. The beak of the sound, immediately on entering the bladder, was pushed forward and slid over an uneven tumor before reaching the back of the bladder. Billroth decided upon extirpating this growth, and on June 15, 1874, did so. First, the perineal section was performed; the diagnosis of a tumor springing from the posterior wall of the bladder was confirmed, but at the same time it was found impossible to remove the neoplasma by the perineal route. Therefore the bladder was opened a second time by a transverse incision in the supra-pubic region; the bulk of the tumor was torn off by the finger and the pedicle carefully cut out, whereby the peritoneum fortunately was not injured. A drainage-tube was drawn through the bladder and kept there for five days until the wounds were granulating well. No severe reaction supervened, and on July 18, the boy was discharged. The tumor showed the consistence and appearance of a soft fibrous tumor, but under the microscope it exhibited a mixed structure of myoma and sarcoma.

11. *Transfusion.*

In a correspondence of the *Philadelphia Med. Times* (August 7, 1875,) from Strassbourg, Germany, the following experiment of Prof. Ponfick is given: A dog received into the jugular vein from the carotid of another animal, during forty-five seconds, twelve per mille of blood of the weight of the dog. During the reception of the blood there was moderate dyspnoea, extreme nausea, but no vomiting; the extremities seemed paralyzed. After an hour, bloody coloration of conjunctiva of both eyes; some red coloration of urine forty-five hours after operation. During first day, dog seemed to be doing well, but suddenly collapsed at the end of twenty-eight hours; respiration became superficial, weak and infrequent, pupils widely dilated, occasional convulsions, and the dog died at the end of eighty hours after operation. Post-mortem examination showed *severe renal disease*. Other

experiments have resulted similarly whether the blood of the other animal has been transfused with or without defibrination. The conclusion drawn from all these experiments is, that the serum of one animal dissolves the blood-cells of other species, and that for transfusion into men, human blood only should be used.

12. *Statistics of Amputations* performed at the Glasgow Royal Infirmary during the twenty-five years ending 31st December, 1873. (*Glasgow Med. Journal*, April, 1875.)

There have been 1,412 amputations, of which 67.9 per cent. recovered, and 32.1 per cent. died. Of the 657 primary amputations, 36.5 per cent. died; of 172 secondary amputations, 51.7 per cent. died; and of 583 amputations for disease, 21.9 per cent. died.—*Monthly Abstract Med. Sciences*, July, 1875.

13. *The Antiseptic Treatment at the Surgical Clinic in Halle, Germany.*

At a recent visit of Prof. Lister in Halle, Prof. Volkmann, who is one of the strongest believers in Lister's antiseptic treatment, gave the following interesting statistics: 44 complicated fractures treated conservatively, all recovered; 67 amputations, with death in 6 cases only; 16 osteotomies, none died; 28 excisions of joints, 7 died.

III. PRACTICAL MEDICINE AND PATHOLOGY.

1. *Differential Diagnosis of Intestinal Invagination.* (*La France Médicale*, No. 47, 1875.)

In an article of the "*Archiv. für Prakt. Heilkunde*," Dr. O. Lichtenstein gives a certain number of symptoms serving to differentiate intestinal intussusception of the large intestine from that of the small one:

1st. Intestinal invagination is rare in the first year of life, and, in fact, in the whole of infancy.

2d. In adults the progress of the invagination of the ileum is more rapid, the phenomena are more marked than in ileo-cæcal invagination, and that of the colon.

Chronicity is rare in invaginations of the small intestine ; it is more frequent in the ileo-cæcal portion, or the colon. Grave symptoms of collapse become manifest more frequently at the beginning of this affection.

3d. *Muco-sanguinolent discharges* are the rule in all invaginations, wherever their seat may be. The author has observed dejections of fæcal material of an aspect wholly normal after a diarrhœa, in ileo-cæcal invaginations ; he has seen it only once, in an adult, in invagination of the colon.

4th. *Meteorism* is a very variable symptom ; usually it is wanting in ileo-cæcal invaginations. In invaginations of the descending colon, it is generally seen to occupy the transverse colon ; afterwards it extends over the whole abdomen. In invagination of the ileum, it is found occupying a limited area, especially the central part of the abdomen, without invading the lateral or epigastric regions.

5th. *Tenesmus* is rare in invagination of the ileum ; it is frequent in that of the colon and the ileo-cæcum.

6th. In invagination of the ileum no *tumor* ordinarily exists, or else (if there be one) it is seated in the centre of the hypogastrium ; when it is seated in the cæcal region, especially if it be stationary for some time, it shows an invagination of the ileum or the ileo-cæcum. The extension of the tumor, when it appears suddenly and corresponds to the course of the colon, indicates most strongly an ileo-cæcal invagination ; less so, one of the colon ; and excludes invagination of the ileum. The situation of the tumor in the left lateral region of the abdomen indicates an invagination of the ileo-cæcum or of the colon. We can never feel the tumor in the rectum, and prolapsus of it never appears in invagination of the ileum without complications. Changes in the consistence, the appearance and disappearance of the tumor, are seen particularly in invagination of the ileo-cæcum.

2. *On the Toxic Principle of Putrid Blood.* FELTZ. (*Centralblatt für Chirurgie.*)

V. Feltz had putrid blood exposed to the air for several months ; and on examining with the microscope from time to time he found that the vibriones and germs gradually were losing their active mobility and finally disappeared entirely. At the same time the odor became less pungent on account of the decrease of ammonia productions. He injected from one-half to two cubic centimetres of such blood into the crural veins of six dogs, and all exhibited the signs of a putrid infection : increase of temperature, loss of appetite, vomiting and diarrhoea ; four of the dogs died after ten or twelve days ; two survived and slowly recovered. The same result was obtained from an injection of blood which had stood in the sun during five months, then was perfectly dried, pulverized and mixed with distilled water. And the blood of all the dogs thus treated was teeming with vibriones and showed all the changes and the disintegration of the red corpuscles so characteristic of a putrid infection. Feltz then comes to the conclusion that the dry putrid blood contains germs which, motionless and apparently dead, revive when introduced into normal blood and produce the signs of a septic infection.

3. *Intestinal Diseases treated by introducing into the Intestinal Tract large quantities of Fluid.* MOSLER. (*Memorabilien*, July, 1875.)

Prof. Mosler (Greifswald) has largely experimented on animals and men on the effect of copious injections into the colon. By the pressure of a fountain syringe he has introduced from one to five quarts of warm water, and has never seen any ill effect from it if only the water is introduced slowly and gradually ; while the patient is lying on his back the water thus injected is forced up as far as the ileo-cæcal valve and sometimes even beyond it into the ileum. The professor considers these copious injections as the best means of effectually cleansing the mucous membrane of the bowels from irritating substances and of applying disinfectants and astringent

remedies over a larger surface of the mucous lining. During the summer of last year he obtained very favorable results from their use in cholera infantum. Even the smallest infants while held on the lap of a nurse would bear them well. As disinfectants, permanganate of potassa and salicylic acid were used. One and one-half drachms of the salicylic acid were dissolved in two quarts of warm water; and of the permanganate of potassa, he dissolved one drachm in two ounces of water and added two tablespoonsful of this solution to the quart of warm water. This topical treatment proved very gratifying in the various forms of dysentery; a few "washings" removed the tenesmus and diminished the number of stools. In typhoid fever they seemed to lessen the tympanitis and the frequency of evacuations, and from his comparative observations of similar cases, some of which were treated by copious injections while the others were not, the doctor is inclined to believe that the disease takes a milder course under the local treatment. And the doctor has also convinced himself that the copious injections of warm water greatly insure a complete expulsion of tapeworms which have previously been acted on by the well-known internal medicines. In support of this claim he gives the history of several cases of which we will quote the following: A farmer, aged 23 years, having complained for some time of much headache, drowsiness, weakness and dislike to work, discovered pieces of a tapeworm in his stool on July 5, 1874, and July 7 he was admitted to the hospital. In the afternoon of that day he took castor oil and in the evening his colon was washed with one and one-half quarts of warm water and milk. July 8, at 7 A. M., another dose of castor oil; at 8, 9 and 10 A. M., ten pills of ext. granat. (R. Ext. Granat. Spirit. 3 ii, Pulv. Rad. Althææ, q. s. ut f. pilulæ, No. 30). At 12 and 3 P. M., copious injections; but the water returned without the worm. At 4 P. M., however, the links began to come out, and the nozzle of the tube was then carefully introduced

into the anus and one and one-half quarts of tepid water injected, which the patient was enjoined to hold as long as possible. Half an hour later, the water was discharged slowly and with it a coil of tapeworms, that on a closer examination proved to contain three complete specimens of *tænia mediocanellata* with their heads.

4. *Treatment of Diseases of Respiration and Circulation by the Pneumatic Method.* DR. A. ROSE. (*Med. Record*, Aug. 28, 1875.)

This paper is mostly a description of the experience of European practitioners with the "pneumatic method." This method consists simply in allowing patients to inhale a condensed atmosphere or to expire into a rarefied one, or to inhale a rarefied one, according as the exigencies of the case, brought about by disease of the lungs or heart, may seem to demand in each instance. It is really forcing condensed air into the lungs by reason of its greater pressure—elasticity, thus aiding the inspiratory effort; or it is sucking air out of the chest by the expiration into a rarefied atmosphere, thus aiding the expiratory act; or it is compelling the inspiratory effort to be unusually intense and powerful by making the air inhaled rare.

The treatment has been tried by Waldenburg, Hauke, and others, in emphysema to aid expiration, in that disorder so difficult; in incipient pulmonary tuberculosis where condensed air has been inspired to give the lungs a greater amount of oxygen and to aid the inspiratory effort, and in bronchitis—in all it is claimed with good results.

Several apparatuses are described for the administration of this treatment, that of Biedert seeming to fulfill all requirements best. This machine is made in the form of an accordion placed in a vertical position and so arranged that one end-board is fixed while the other is movable, and the whole apparatus being suspended upon joints that allow of its being inverted easily. Weights of various sizes are attached to the movable end-piece, which, as will

be seen, with the apparatus in one position compress its contained air and in a reverse position, by pulling down, rarefy it.

The condensation or tension of the air used varied from one-sixtieth to one-twentieth of an atmosphere. Patients were required to use the apparatus for a few minutes each day.

Waldenburg says, "inspiration of condensed air, as well as expiration into rarefied air, increase permanently the vital capacity of the lungs (as shown by spirometry), and the power of inspiration and expiration as measurable by the pneumatometer." Some cases he reports, seem fairly to bear him out in this statement.

As in inspiration of condensed air there is increased intra-thoracic pressure, tending to increase the force of the out-going or arterial blood and to retard the motion of the in-coming venous blood, thus increasing the pressure in the periphery of the greater circulation and lessening the pressure within the chest, and decreasing the amount of blood in the lesser circulation, it is argued this expedient may be of value in any cardiac disease where it is desirable to lessen the tension of the heart walls and facilitate the passage of blood through its cavities and through the lesser circulation.

Chronic valvular disease, chronic inflammatory processes in the lungs, and bronchial catarrh of severe forms, are instanced as cases where the treatment would be useful.

Of course inhalation of rarefied air has exactly an opposite effect and the indications for its use would be opposite.

5. *Some of the Conditions under which Pneumonia proves Fatal.* FRANCIS DELAFIELD, M.D. (*Med. Record*, Aug. 21, 1875.)

Statistics are presented of 122 cases of death from pneumonia, where post-mortem examinations were made by or under the direction of the writer. Data are furnished also regarding 1,134 deaths from the disease, in New York, during the year ending March, 1874, and 1,276

during the year following. Comparing the death rate in the last two series of cases with the line of mean temperature for each month of the year, they are found to nearly correspond, the high rate of mortality attending the low temperature. These series of cases were marked by a decided tendency to death on certain days of the disease. "Beginning with a few deaths on the first day of the disease, the curve of mortality runs rapidly up and reaches its maximum on the seventh day, then falling somewhat on the eighth and ninth days, it ascends on the tenth. From the tenth day there is a rapid decrease in the deaths, until the fourteenth day, when the curve rises abruptly. In the same way there is a third maximum on the twenty-first day, and a fourth on the twenty-eighth day." The illustrative charts of the cases respectively of the two years correspond in the rise and fall of the death rate, in a most remarkable manner; the seventh day fatality being marked in both.

Of the 122 cases examined post-mortem, nearly half died at a time when the lungs were passing from the condition of red to that of gray hepatization, while more than a quarter died while in the stage of red hepatization. Comparing the histories of the cases with the autopsies, it appears that in one case red hepatization continued until the eleventh day, and in one case that this stage was completed in 24 hours; also that the disease may be passing from red into gray hepatization by the second day, and it may not have become completely gray by the eighteenth day.

Complete gray hepatization is not reached usually until the seventh day.

Of the 122 cases, in 35, portions of both lungs were involved, and in 25 of these cases not more than one lobe of one lung was left unconsolidified.

In 32 cases one entire lung was hepatized—the right in 23 and the left in 9.

In 54 cases only one lobe was hepatized; in 24 cases the upper lobe alone, in 30 cases the lower one.

The right lung alone was involved in 63 cases ; the left alone in 23. Complications occurred in all but 15 of the 122 cases.

The complicating lesions occurred as follows: oedema of remaining part of lung in 28 cases ; emphysema and chronic bronchitis, 21 cases ; a large amount of purulent serum or fibrin in one or both pleural cavities, 16 cases ; acute pericarditis, 12 cases ; fatty liver, 12 cases ; valvular disease of heart, 6 cases ; cirrhotic liver, 3 cases ; chronic phthisis, gangrene of the lung and basilar meningitis, 2 cases each ; waxy liver, 1 case.

"The kidneys were in a condition of chronic Bright's disease in *thirty-four cases*. The kidneys were in a condition of parenchymatous degeneration, secondary to the pneumonia, in *twenty-five cases*."

In 80 cases there was marked delirium ; 15 of the cases were in hard drinkers, and in nearly all a large amount of lung tissue was involved.

In 9 cases there was found more or less meningeal inflammation or congestion.

In 5 cases death occurred with convulsions followed by coma. In 4 of these there existed chronic Bright's disease.

Twelve of the patients died suddenly ; 5 of these seemed to die of dyspnœa. "In none of these cases of sudden death did the autopsy show that death was attributable to heart clot."

6. *Trichinosis in Dearborn Co., Ind., in 1874.*

Dr. George Sutton, of Aurora, Ind., in a paper read before the State Medical Society for the current year, presents the histories of ten cases of trichinosis occurring under his observation in 1874. The cases were all propagated by the meat of trichinous hogs, eaten from one table. Three cases resulted in death. There was nothing peculiar in the symptoms of the cases generally, unless it be the uniformity with which severe diarrhœa followed within a few hours the eating of the half-cooked sausages.

Careful post mortem examinations were made in two cases, both in children, with the result of finding very few trichinæ in any of the tissues of the body. There was evidence of severe gastro-intestinal and peritoneal inflammation, however, and from this, the doctor believes the deaths resulted. In these cases there was little or no œdema. In the other case only the muscles of the thigh were examined, and there were found so many trichinæ that it was estimated a cubic inch of muscle contained more than 100,000 of them. There was marked œdema in this case, with soreness of muscles.

The rapid appearance of the parasites in distant parts of the body in so short a time after their development to the migrating size, leads Dr. S. to the conclusion that they are distributed by the circulation.

Extensive observation was made of the flesh of hogs slaughtered in the vicinity, upwards of 1,500 being examined, and trichinæ were found in 3 to 16½ per cent. of them, differing in different lots. Dr. S. believes from his microscopical examinations that the hog cholera is not trichinosis.

7. *A good way to distend the lower bowel in intussusception.*

Dr. Douglas Morton injected into the bowel of a young infant believed to be suffering with intussusception, one-third each of a pair of Seidlitz powders dissolved in an ounce and a half of water, introducing the carbonate solution first. Preventing the escape of the gas, the abdomen was vigorously kneaded. The child was fully anæsthetized. Recovery followed.—*Practitioner*, July, 1875.

IV. THERAPEUTICS.

1. *Therapeutics of the Diarrhœa of Typhoid Fever.* (*Practitioner*, 1875.)

Dr. George Johnson, of London, the fecund writer on the kidney, argues in favor of an exclusively *milk* diet in the management of diarrhœa of typhoid fever. Observation teaches him that the abnormally sensitive condition of the gastro-enteric tract in this disease, is greatly

aggravated by too much medicine, and too abundant alimentation. His onslaught on the mineral acid treatment, introduced a few years ago by Chambers, is especially noticeable. "I have no doubt that the comparative infrequency of the severe and obstinate diarrhoea amongst my enteric fever patients, during the last few years, is partly attributable to the *discontinuance* of this mineral acid treatment," he says. His principal dependence is careful nursing and proper feeding, and generally no medicines are necessary. The result of such a radical change in the management of typhoid fever, "has been, that diarrhoea is a less frequent symptom than formerly, and where it does occur, it is far more tractable, while tympanitic distension of the abdomen is a rare event." The sedate opium clyster and the frisky turpentine stupe, have quite disappeared from Dr. Johnson's iatrotechnic repertoire, in typhoid fever cases. His main reliance is a milk diet; milk has an "antilaxative, and even constipating effect in various morbid states, and when given alone it is one of the best antidotes for the diarrhoea of typhoid fever." In addition to milk, he gives, usually, a very small amount of beef tea and two raw eggs, every twenty-four hours. The medicines used are the "yellow mixture," which is simply colored water, "an exceptional dose of chloral to procure sleep, and a tonic during convalescence."

2. *Apocynum Cannabinum* in Dropsical Affections.

The value of this drug in dropsies was discussed at some length in a late meeting, May 18th, of the Kings County, N. Y., Medical Society. Dr. Hutchins related a case "of general anasarca, complicated with pleuritic effusion and hydro-pericardium," in a man 60 years of age, with extreme dyspnoea, from enormous distension. All diuretic means tried had failed, and at last apocynum was used. The part of the plant that is officinal is the root, but experience proves that the BARK of the root ONLY is efficacious. This fact was not made known to

the doctor until after a few trials of some of the ordinary shop preparations of the drug, which trials were failures. Accordingly a fluid extract was made of the root's bark, and given to the patient. In forty-eight hours, "the man who had been so frightfully distended was reduced to a skeleton." The diuretic action of this agent is powerful. The amount of urine passed under its influence was said to be "incredible" in Dr. Hutchins' case. The patient lived for a year after the above named medication, and during that time "the water never accumulated, any disposition thereto being immediately relieved by the infusion of this drug."

Prof. Armour related the particulars of similar success in two cases of general anasarca. The patients were suffering from "immense dropsical accumulations, and all the usual remedies had failed." After the administration of apocynum, and within seventy-two hours, the patients were drained almost to skeletons. The professor "has but little confidence in using cathartics, diuretics, apocynum or any other remedial measure in removing fluid effusion in close cavities, when it results from acute or sub-acute *inflammation* of serous tissues." If the effusion be inflammatory *exudation*, surgical means only will relieve the patient. If the effusion be a *transudation*, then apocynum, diuretics and hydragogue cathartics will avail. He attributes his *successful* applications of apocynum to the former class of cases, and his *failures* to the latter.

Particular stress is laid on the necessity of obtaining a good drug, and the right part of it. If attention be not paid to this point the physician might as well amuse himself with cinnamon water.

8. *Mechanism of the Action of Jaborandi and a Summation of its Effects.*

A series of very elaborate articles, entitled "Physiological and Therapeutical Studies on Jaborandi," has appeared in the new *Journal de Thérapeutique*, of Paris, since Nov. 1, 1874, from the pen of M. Albert Robin, one

of the medical savans of France. Extensive qualitative and quantitative analyses of every obtainable secretion and excretion of the human body have been repeatedly made while taking jaborandi. The effects of this drug on the eye, on the bodily temperature, in health and in febrile diseases, on the pulse, (extensive sphygmographic tracings accompanying the article,) are given in tedious detail, in numbers of this journal extending over a period of nine months; and in the last number are given the "mechanism of the action and a summary of the effects" of this new therapeutic agent, which are here given in full:

The active principle, *pilocarpus* (or pilocarpia, the alkaloid of jaborandi,) produces its influence by exciting while passing through, the salivary and sudoriparous glands, its elective emunctories; the activity of the latter is prodigiously exalted; it is accompanied by a "sanguinary efflux to the hyperexcited organs and by a certain degree of general stimulation of the system."

The irritation of the secreting cells and the peripheral stimulation, are transmitted to the reflex centres, by the eisodic nervous filaments and returned to the vasodilator and vaso-constrictor nerves which furnish to the organs of secretion the whole of the nutritious fluid exacted by their increased action.

This, it seems to us, is the physiological mechanism by which jaborandi acts to produce the effects, studied in the course of this investigation, which are:

Diaphoresis and sialorrhœa, with the elimination of rather a large proportion of urea, of the chlorides, of pytaline, and of the carbonates.

Secondary hypercrinias, lachrymal, nasal and tracheo-bronchial; secretory irritation of glands annexed to the digestive tube, manifest, especially, when the external effects are a little complained of.

Slight augmentation of the temperature of the skin when the blood flows into this region to supply the material to the sudoriparous glands for their secretion; cold

in the cutaneous envelope in consequence of the evaporation of the sweat upon its surface.

Corresponding increase in the pulse, which augments in frequency at the onset of the sweating and diminishes with the same ; diminution of the intra-vascular tension, consecutive to the augmentation of capacity of the general circulatory system ; irregularity of the beats of the heart when given to those with cardiac troubles, with a sort of toxic asystolia, apparently resulting from a disturbed action of the medicament upon the innervation of the heart.

Diminution of the quantity of urine secreted ; but this is not in sufficient quantity to compensate for the fluids lost through the agency of the skin and salivary glands, in the same way that elimination is accomplished, although the kidneys may be liberated from a portion of their functional work.

A diminution in the phenomena of disassimilation, very trifling, as can be shown by an actual falling off of urea, which, however, is disproportionate to the energy of secretory activity, and indeed, seems independent of it ; diminution of the quantity of uric acid eliminated by the urine, probably owing to a diminution in the intra-organic formation of this acid ; and if it be admitted that uric acid is one of the conditions in which the albuminoid materials of the tissues are eliminated, before reaching a complete oxydation of which urea is the limit, the diminishing of this acid compared with that of urea will be still more an argument for our opinion as to the lessening of disassimilative combustion.

Diminution of the chlorides.

After the action of *jaborandi*, there is relatively greater energy in disassimilation, especially when the hypercristic effects of the medicament have been produced with great activity.

Finally, a diuretic action of *jaborandi* taken in fractional doses.

Such is a hasty schedule of the principal physiological effects of *jaborandi*.

4. *Gelsemia. Its Physiological Action.*

Dr. J. Ott, Demonstrator of Physiology in the University of Pennsylvania, after a prolonged series of experiments enumerated in the *Philadelphia Med. Times*, July 31, 1875, which he made in the laboratory of Prof. F. G. Smith, gives the following summation of his observation on the action of this alkaloid of gelseminum.

1st. In cold blooded animals it paralyzes first the sensory ganglia, and then the motor ganglia in the central nervous system. This order is reversed in warm blooded animals.

2nd. It diminishes the pulse and pressure.

3rd. This decrease of pulse rate is due to lessened irritability of the excito-motor ganglia of the heart.

4th. The fall of pressure is due to the diminution of cardiac irritability and vaso-motor tonus.

5th. It decreases the respiration through a paralyzing action on the respiratory centres.

6th. It dilates the pupil.

7th. It reduces the temperature.

5. *Chloral versus Strychnia Poisoning. Another Case.*

Dr. J. W. Winslow, of East Hampton, Mass., adds another case of successful treatment of strychnia poisoning with chloral, to the many already recorded. He writes to the *Philadelphia Med. and Surg. Reporter*, Aug. 14, 1875, "On my arrival at the house about an hour and a half after the dose was taken (half a teaspoonful of strychnia in half a tumbler of water), I was met by the father, who told me that his daughter, a young woman, had had spasms for the past hour and that they were increasing in severity—that she was "*just gone*." Cupric sulphate produced speedy emesis. "Spasms were severe and continuous." Twenty grains chloral were given, when suddenly a frightful opisthotonic

convulsion occurred. "Soon as possible afterwards thirty grains more were given, when the spasms gradually diminished in frequency and force, entirely subsiding within the space of two hours." Recovery was complete.

6. *Still Another.*

The *Philadelphia Med. Times*, also bearing date Aug. 14, 1875, records another case of successful treatment of a case of strychnia poisoning by chloral, communicated by Dr. C. Bivine, of Tarrytown, Md. He gave 40 grs. of chloral when the patient—a girl of 16 years of age—had reached the stage of "general spasms, accompanied by opisthotonos and asphyxia;" 30 minutes thereafter he gave 40 grs. chloral more, and "soon after, she fell asleep." Thence to recovering he gave her chloral and potassic bromide as the case demanded. When she awoke and convulsions appeared, more chloral was given. Gradually the toxic action passed off. At the end of 48 hours there were only "slight occasional renewal of spasms and some nervous spasms." Recovery, as in the preceding case, was complete.

7. *Treatment of Neuralgia.*

Prof. von Pitha having suffered from various kinds of neuralgia for the last two years, gives an interesting account of his observations on himself, and comes to the conclusion that the hypodermic use of morphia is the only rational treatment, and generally can be employed without injurious consequences for a long period. But very small doses must be given to begin with, and gradually increased as need be. To guard against the unpleasant action of the morphine on the stomach, P. recommends the addition to the morphine of sulphate of atropia (gr. $\frac{1}{16}$) or the internal administration of muriate of quinia in black coffee.—*Wiener Med. Zeitung.*

Book Reviews.

[NOTE. — All works reviewed in the pages of the CHICAGO MEDICAL JOURNAL AND EXAMINER may be found in the extensive stock of W. B. KEEN, COOKE & Co., whose catalogue of Medical Books will be sent to any address upon request.]

ON PARALYSIS FROM BRAIN DISEASE IN ITS COMMON FORMS.
By *H. Charlton Bastian, M.D., Etc.* New York: D. Appleton & Co. 1875. pp. 335. Price, \$1.75.

It is as pleasurable as it is rare, among the multitude of books that appear to have been born because their authors and not the world were in need of them, to come to one that is valuable throughout and that has hardly a defect. Yet such is the volume before us. It comprises eight lectures delivered on this interesting subject by Dr. Bastian in University College Hospital in 1874. Previous to their publication in book form the lectures were revised and somewhat enlarged.

The author discusses the subject from a purely clinical stand-point, in marked contrast with the manner heretofore generally in vogue among writers on this subject, and of which he complains, of considering the topic almost solely from the aspect of pathological science.

There is no objection to pathological studies; these are valuable. But any one of several different kinds of lesion in a given part of the brain may cause the same group of symptoms; so that a most important study of the subject, for the active physician especially, must be that which considers, from the symptoms and history, the location in the brain of the lesion, the extent and nature of the damage, and, as far as possible from such information, the pathological nature of the lesion in each case, the prognosis and treatment. Such a study the author attempts to supply, while at the same time a tolerably systematic consideration of the whole subject is presented. As he truly says of his subject, "No

department of medicine stands more in need of being represented in a text book of moderate compass."

In the first lecture the causes of hemiplegia are briefly considered, "with the view of obtaining data available for purposes of diagnosis." The only causes thoroughly discussed, however, with their more immediate consequences, are rupture, occlusion and spasm of the cerebral arteries. Meningeal, cerebral and cerebellar hæmorrhage, thrombosis and embolism, and the softening often so rapidly following these, are considered at considerable length, while induration, tumors, abscesses, injuries and congenital atrophies are barely mentioned, as they relate to the more slowly arising and more irregular forms of hemiplegia. About spasm of vessels as a cause, it is very safely said, "there is a great deal of uncertainty." There is probably an altered molecular state in the brain tissue which accounts for the spasms which come and go so quietly that they leave no organic change by which we may be *sure* they ever existed, and yet the author has no doubt many cases of hemiplegia are to be placed in this category. Here he groups many cases of "Epileptic Hemiplegia," "Emotional Hemiplegia," and a few "cases of an hysterical character." Patients with various symptoms that class them under these respective heads are attacked, fall down, become hemiplegic and after a variable time and possibly many vicissitudes recover, and no discoverable lesion tells us positively of the condition that existed. Spasm of vessels is the explanation offered; but sparseness of facts that can be presented bearing on this point make it one of great interest in clinical study.

Speaking of hemichorea as being followed by hemiplegia of the same side, the author believes in a certain number of such cases "minute vessels become blocked in the corpus striatum and adjacent parts of the brain," he himself having found this on three or four occasions.

In the second lecture hereditary influences as favoring

hemiplegia are considered ; then follows an admirably concise statement of the important knowledge—that from both early and recent investigations—concerning the distribution and relations of the cerebral blood vessels, the lecture closing with a discussion in part of the symptomatology of hemiplegia, which is continued through succeeding lectures.

A lecture is devoted to alteration of nutrition, degeneration of the cord, and the symptoms due to the functional differences between the two cerebral hemispheres ; another to regional diagnosis in brain disease—the most valuable chapter in the book, in our estimation ; the seventh considers the cerebellum, its functions and symptomatology, and closes with half a dozen pages on “pathological diagnosis,” while in the closing lecture the subjects of prognosis and treatment are briefly considered.

With Broadbent, the author denies for the optici thalami the seat of the ‘sense centre’ for common sensation, but locates it on the upper and posterior part of the pons Varolii, thereby agreeing with “many eminent physiologists.”

Of the author's recorded cases of hemiplegia about three and one-half per cent. were of the irregular and exceptional form in which the upper extremity recovers more rapidly than the lower—the reverse being the rule. He does not think these causes are necessarily attended with dementia or an earlier fatality than the more common forms—herein differing with the opinion of Trousseau.

After referring at considerable length to aphasia and other conditions and symptoms due to a lesion in the left hemisphere, we are told that lesions of the right hemisphere are more often fatal than those of the left ; that, too, disorders of nutrition on the paralyzed side and convulsion and spasms of these parts, as well as the “conjugated deviation of the eyes,” “hysterical paralysis,” and paralysis and convulsions of muscles on the same side of the body with the lesion, occur most with

lesion on the right side. "The occurrence of paralysis or of convulsions on the same side as the brain lesion, is, with our present knowledge, quite inexplicable." But the author suggests that it might be explained by supposing some vice of development had led to a failure in the perfect decussation of the fibres in the motor tract, and thinks it better to entertain the possibility of such an event than to distrust the regularity of the phenomena produced by brain lesion.

He says the habit of bleeding and purging is now so completely abandoned that it is needless to object to it—in which statement he is in some degree mistaken, at least so far as this country is concerned.

He advises strongly against the early use of faradization of the muscles, and condemns the sending of galvanic currents through the head at any stage. He is not aware of any sound principle upon which such haphazard attempts can be commended. In the rare cases of the early wasting of muscles "much good may be done by faradization." With this brief reference he dismisses the subject of electricity.

It is to be regretted that more of the author's sensible notions on treatment are not given. Yet this defect we can hardly complain of as the major promise was to discuss clinical considerations, and as upwards of 200 pages are devoted to a review of symptomatology and original diagnosis.

What the lectures omit, rather than any statements they contain, will be a disappointment to the reader. The treatment of the subject is so admirable that one instinctively finds himself wishing more had been said on some points, where space and time seem to have compelled the author to abbreviate. Altogether the book is an excellent one. The profession can well bear to be given more books of this kind; they are needed. We need more monographs generally, and we can particularly profit by more books like this which amounts to a digest of the best studies on the subject it treats, condensed

into a small space by an able hand, with his own studies and opinions to tone the whole.

CLINICAL LECTURES AND ESSAYS. By *Sir James Paget, F.S.R.*
 Edited by Howard Marsh, F.R.C.S. New York: D. Appleton & Co. 1875. Price, \$5.00.

Although most of these lectures have already been published in various medical journals, the profession is greatly indebted to Mr. Marsh for having collected them into one volume. Paget's writings are of more than a transient interest, and this book is a valuable contribution to medical literature. We admire the rich experience and keen observation as well as the great sincerity of the eminent surgeon. It is a pleasure indeed to read a book which, on every page, leaves the stamp of truthfulness and wise judgment. Distinguished by his operative skill he does not underrate the minor parts of surgery in their influence upon the ultimate success of operations; speaking of the calamities of surgery he graphically demonstrates the great importance of carefully dressing the wounds and looking to all the seemingly little things that, after an operation, minister to a patient's comfort and welfare. And he also gives the sound advice that before deciding upon an operation, "you should examine the patient with at least as much care as you would for a life-insurance." But we need not enter into the details of the contents of a book every physician ought to read in full.

F. C. H.

THE MULTUM IN PARVO REFERENCE AND DOSE BOOK. By *C. Henri Leonard, M.A., M.D.* Second Edition. Detroit. Paper, 60 cts.; cloth, 75 cts.

Table of contents contains—List of Doses, Official Preparations, Rules of Pronunciation and of Genitive-Case Endings, Incompatibles, Poisons, Antidotes and Tests, Urinalysis, Obstetric Syllabi, Visceral Measurements, Epitomizations of the Exanthemata, Pronunciation of Medico-Biographical Names, Ethics, Fee-bill and Emer-

gency Expediencies. Mindful of, and appreciating the thousand-and-one "Casebooks" and "Handbooks" for Physicians, still every one must acknowledge that this author has compressed an immense amount of ready, practical information into the minimum space.

BOOKS RECEIVED.

THE TEST POCKET ANATOMIST, (founded on Gray). By *C. Henri Leonard, A.M., M.D.* Detroit. 50 cts.

PAMPHLETS RECEIVED.

RELATIONS OF THE NERVOUS SYSTEM TO DISEASES OF THE SKIN. By *L. D. Bulkley, A.M., M.D.*

TRANSACTIONS OF MEDICAL ASSOCIATION OF ALABAMA.

AMERICAN CLINICAL LECTURES: Capillary Bronchitis of Adults. By *Prof. Calvin Ellis, M.D.*

FRACTURES OF THE INFERIOR MAXILLARY JAW. By *Dr. J. F. Montgomery, Sacramento, Cal.*

EXCHANGES.

Cincinnati Lancet and Observer—September.

New York Med. Record—Aug. 28, Sept. 4, 11.

Philadelphia Med. Times—Aug. 28, Sept. 4, 11, 18.

The Clinic—Aug. 28, Sept. 4, 11, 18.

Richmond and Louisville Med. Journal—August.

The Practitioner—July and August.

Canada Lancet—July.

Boston Med. and Surg. Journal—Aug. 26, Sept. 2, 9, 16.

Students' Jour. and Hospital Gazette—Aug. 14, 28.

Chemist and Druggist.

Med. and Surg. Reporter—Aug. 28, Sept. 4, 11.

Centralblatt f. Chirurgie, N. 31, 32, 33, 34, 35, 36.

New York Med. Journal—Sept.

Nashville Med. Journal—Sept.

American Med. Weekly—Aug. 28, Sept. 4, 11.

Atlanta Med. and Surg. Journal—Sept.

Allgemeine Medicinische Central Zeitung—62, 63, 64, 65, 66.

Allgemeine Wiener Med. Zeitung, 31, 32, 33, 34, 35.

Photographic News—August.

Boston Journal of Chemistry—Sept.

Virginia Med. Monthly—Sept.

The Druggists' Circular—Sept.

Nashville Journal of Med. and Surg.—Sept.

The Med. Herald—Aug.
 The Pharmacist—Sept.
 Detroit Review of Medicine—Aug. and Sept.
 New Orleans Med. and Surg. Jour.—Sept.
 St. Louis Clinical Record—Sept.
 The Doctor—Sept.
 The Dental Cosmos—Sept.
 Am. Dental Journal—Sept.
 Progres Médicale—July 28, Aug. 7, 14, 21, 28.
 Memorabilien—Aug. 26.
 Irrenfreund, No. 6.
 Pacific Med. and Surg. Journal—Sept.
 London Lancet—Sept.
 La France Médicale—Aug. 25, 28.

Translations.

HERMAPHRODISM,

FROM A MEDICO-LEGAL POINT OF VIEW.

Translated from the French of Basile Poppesco,

By E. WARREN SAWYER, M.D.,

LECTURER ON OBSTETRICS, RUSH MEDICAL COLLEGE, CHICAGO.

(Continued from page 706.)

III. NEUTER HERMAPHRODISM.

A third variety of hermaphrodisism is that which is designated under the name of neuter hermaphrodisism ; it has been attempted to include in this variety two different categories : 1, the persons whose sex is not easily determined, well pronounced ; 2, those persons in whom one observes the simultaneous existence of the organs of both sexes ; this variety is also called the bisexual hermaphrodisism.

The first variety does not exist ; there are no beings absolutely neuter, not having one sexual attribute ; and nearly all the cases reputed to be such, should be included in the apparent hermaphrodisism of the male sex. Such

is, at least, the opinion of the medical jurist, and it is certain that in consultations that which is demanded of him in law should be adopted.

Prof. Tardieu does not admit a single authenticated instance of bisexual hermaphrodisism, with coexistence of all the essential and accessory organs of the male and female sex. The fact has been admitted, however, by such authors as Maret, Meckel, Dugès, Is. Geoffroy Saint-Hilaire, Dutrochet; but it is true that, at this epoch, they were limited to an anatomical examination of the organs. We will make known our observations, however, in which the histological examination having been made by competent men, the simultaneous existence of the ovaries and testicles was established beyond question.

Maret* reported an instance of the simultaneous existence of the organs of both sexes; on one side, said he, the labium contained a veritable testicle, with the cord of the spermatic vessels, the vas deferens, and a seminal vesicle full of spermatic fluid. The right labium enclosed a membranous pouch, in which descended, when the abdomen was compressed with the hand in the right iliac region, an ovoidal body which was recognized as a uterus, without any communication with the external parts, but having one Fallopian tube and one ovary. "Hubert," says this author, "though he had the essential organs of both sexes, was not able to fill the functions of either; in vain did the testicle elaborate the semen when an imperforation of the penis opposed its emission; a Fallopian tube embraced in vain a well formed ovary, when the uterus was enclosed in a pouch without opening."

This singular variety in which the individual is found on one side of the body constructed after the type of the male sex, and on the other after that of the female sex, has

* Maret Mém. de l'Acad. de Dijon : *Vesiculas seminales et ovarium habens.*

been described by Is. Geoffroy Saint-Hilaire,* under the name of hermaphroditism with excess in the number of parts, *hermaphroditism bisexual or lateral*. Verdier and Sou have met with an analogous instance, as have also Colombo and Petit; these cases will be rather of the type that should be known under the name of androgynia; but the most commonly then, the arrest of development, especially in the case where the sexual system is double, belongs sometimes to the sphere of the masculine organs, sometimes to the feminine organs, in virtue of the law discovered by Serres, which he designated under the name of balancing the organs.

But, we repeat it, these varieties of hermaphroditism are more than exceptional; and we have enlarged upon them because of the scientific standing of the men who have called attention to them. Without the aid of the microscope, it appears to us very difficult to distinguish between an ovary and a testicle, especially when concerned with organs that are atrophied, compressed, and have lost not only their normal relations but all their external features and their distinctive microscopical characteristics. Our aim has been only to represent the ideas and the opinions sustained and learnedly elaborated by those who have preceded us.

In closing, I will name one other variety, designated under the name of superadded hermaphroditism, by Dutrochet: in this case, the deepest organs are of one sex, the medium organs are of the opposite sex, and the external organs are the association of both sexes.

From what precedes, we are able to conclude, in a medico-legal point of view, that hermaphroditism presents itself to the observer under two principal forms; the frequent one is that in which an individual of the male sex offers an arrest of development, with some general and local features which approach the female sex; the other rare and exceptional, in which the person of the

* Is. Geoffroy Saint-Hilaire. Recherches anat. et phys. sur l'hermaphroditisme chez l'homme et les animaux; rapport de Dutrochet.

female sex has, simultaneously, an excess of development in one organ and an arrest of development in some others; with a predominance of the masculine conformation more or less marked.

EMBRYOLOGY AND PATHOLOGICAL PHYSIOLOGY.

The preceding study would certainly remain in a state of confusion and be vaguely remembered if, in reviewing the facts, we could not at first sight with clearness and precision refer all these infinite varieties to an arrest of development; thanks to the works of modern embryology. The names of Isidore Geoffroy Saint-Hilaire, Dutrochet, Serres, and of Coste, recall the authors who have best elucidated these questions.

The genital organs consist essentially of two classes, which are clearly distinct, both in the man and in the woman: those of the one preponderant and essential, are developed within the abdominal cavity, and are especially designed for the secretion of the fundamental products, ovule and sperm; the other, secondary and accessory, perform their functions outside of the abdominal cavity, in the neighborhood of the pubic arch. These two parts during intra-uterine life are independent of each other; they have a different location, their vessels and nerves arising from opposite sources, and are even separated from each other by structures, whose normal rôle is to disappear at a given moment of foetal evolution. When this disappearance does not take place, and the adhesion abnormally persists, there will result some variety of these arrests of development which we have designated under the name of hermaphrodisism.

Take for example the conformation of the female sexual apparatus; one of the two groups of organs is superficial and comprises the external genital organs; the other is profound, intra-pelvic, and comprises the organs of generation properly speaking, or the internal genital organs; these two groups are connected by an intermediate organ, the vagina, interposed between the *bas-fond* of the

bladder anteriorly and the rectum posteriorly, in such a manner that it is a mixed organ, having a particular development, a special formation : should this conduit become obliterated, and the internal genital organs become atrophied, then the external genital parts present an exaggerated development, and there will result that variety of hermaphrodism which is usually designated under the name of apparent hermaphrodism in the female sex ; because then the clitoris acquires an exaggerated size, it is grooved, as in those individuals who are the subjects of hypospadias, and the meatus, also, opens almost at the base of the clitoris.

But the results of embryology will enable us to penetrate still further in the study of these facts. In an embryo of thirty-five days, the Wolfian bodies, situated on the sides of the vertebral column, are completely developed : on their external face, there is a distorted conduit which terminates above in a wide orifice, inferiorly it opens in the bladder alongside of that of the opposite side ; it is this conduit, called the spermduct or oviduct, which, later, will constitute the *vas deferens* or *Fallopian tube*, according to the sex. On the internal surface of the same Wolfian bodies is observed a swelling which grows from day to day : this will be the testicle or ovary ; this swelling has two filamentous processes, the superior of which goes to be attached to the oviduct, the inferior goes to be inserted in the pubic spine. Later, if the individual is of the male sex, the spermduct goes to unite with the testicle, then the *vas deferens* exists ; on the contrary, if the person is of the female sex, the Fallopian tube remains isolated from the ovary.

Inferiorly, the oviduct and the spermduct are arranged in two different ways ; the spermduct remains separated from its fellow, and, after traversing an enlargement which will become the prostate, opens to the inferior part of the urinary passages. The prostate, which, according to some authors, (Meckel, Is. Geoffroy Saint-Hilaire,) ought especially to be regarded as the analogue of the uterus,

is a structure formed by the two vasa deferentia, just as will be seen the uterus is manifestly a formation of the two oviducts. In reality, these two conduits unite to form a single cavity which will be the cavity of the uterus; should the fusion be incomplete, there will result a vice of conformation very rare, a partitioned uterus; of which a remarkable specimen is in the museum of Orfila.

The preceding observations arise from the facts already prominently advanced by Dutrochet, in his report on the memoir of Is. Geoffroy Saint-Hilaire, viz., the complete analogy, the absolute identity which exists in the sphere of the internal generative organs during the first months of intra-uterine life, in the blastema even; in the primitive seat, the absolute identity which exists in the internal part of the Wolffian bodies; the analogous structure of the conduits which constitute the Fallopian tube or the vas deferens; even the anatomical elements entering into the structure of that which will some day be the ovary or testicle, the uterus or the prostate. It is not until the eighth month that the testicles leave the places which they occupied, and during the ninth month they traverse the inguinal canal in order to reach the scrotum. This remarkable analogy is even more striking, when we come to consider the development of the external generative organs. It is at about the sixth week that there is seen to form, from the animal layer, or the external layer of the blastodermic membrane, a fissure which is common to the genito-urinary organs and the apparatus of defecation, and which has received the name of *cloaca*; this fissure will always extend to meet the *cul-de-sac* formed by the inferior extremity of the intestinal layer. From each side of this antero-posterior fissure, according to Coste, appear superiorly two projections: rudimentary corpora cavernosa; inferiorly, there are two other smaller projections, which in the man are the origin of the scrotum, and in the woman of the labia majora. These two upper processes unite at their

upper surface, leaving on their inferior surface a groove for the canal of the urethra in the male, while in the female the groove remains permanent. If, in the male, the urethral canal fails to be developed beneath the corpora cavernosa, which constitute the penis, there will result a vice of conformation which we have already spoken of as hypospadias. The two inferior processes remain distinct from each other; but we may know at once, as Professor Richet* has said, "whatever the future sex may be, no difference exists; and it is not till later, in uniting, that the two processes form the scrotum in the male, while in the female, separated by the longitudinal fissure, they form the labia majora."

Later, a septum divides into two portions the fissure, which to this time was designated under the name of cloaca; the anterior division of this fissure, (uro-genital) continues to be a cavity into which the excretory canals of the genital and urinary organs open.

Finally, in the male, the union of the two lateral processes takes place, while in the female the persistent labia continue to limit an opening which now takes the name of vulva.

Thus, from this observation, we learn that, in the first moments of their existence, the external genital organs of all foetuses have the same conformation, to that degree, even, that the clitoris in the foetus of four months is as large as the penis of the foetus of the same age. Two phases, in the development, are then observed: in the first, the separation of the two lateral parts, which to this time had developed towards each other, remains permanent; whilst in the second phase, and only in the male foetus, the union of the two lateral parts is effected; in this connection, we repeat the judicious remark of Dutrochet†: "With respect to the conformation of the external genital organs, every man was at first a woman."

Should the two borders of the uro-genital fissure fail

* Richet. *Traité d' Anat. Méd-Chirurg.*

† Dutrochet. *Acad. des Sciences.*

to approach each other, there will be beneath the penis, often of diminished size, an infundibuliform cavity, bordered on each side by a fold which will resemble the labium majus much more than ordinarily obtains in these cases; the urethra failing to effect its fusion beneath the united corpora cavernosa, there is hypospadias, and often cryptorchidia. There results then that vice of conformation which is made the subject of this study; and which allows us still to conclude formally that, in the great majority of instances, the hermaphrodites ought to be referred to the male sex.

Thus, as Serres has remarked in his *Organogénésie*, the foetuses of the mammifera pass by different degrees of organic formation, which correspond in their transitory phases to the normal, constant state of the creatures that are placed lowest in the organic scale; thus is not the monstrosity often, he asks, the persistence of one of the transitory phases of the foetal organization?

How are these arrests of development, located in the various parts of the genital organs, to be explained? Here again, we are enabled to accept the considerations given by Serres, regarding the preponderant influence of the vessels on the development of the organs. According to the origin of these vessels, he divides them into three orders, each one corresponding to a subdivision of the generative organs; the generative organs themselves being constituted by the association of six principal sections. Moreover, this fact has been established by Is. Geoffroy Saint-Hilaire, and that, too, in the male sex as well as in the female. The superior division receives its arteries from the aorta, through the spermatic artery or the utero-ovarian artery (ovarian, spermatic); the middle division, from the hypogastric artery, through the uterine arteries, the arteries of the prostate, the internal pudic, etc.; finally, the inferior or superficial division has its own arterial network arising from the external iliac artery or the femoral, through the external pudic artery. Upon these data, however, his explanations are rather

more philosophical than positive. Serres thus founds his conclusions, in order to show how the arrests of development, which constitute hermaphroditism, may be located either in the two inferior symmetrical divisions, (for example, absence of union of the two lateral folds which should form the scrotum), or the two superior divisions, (absence, or arrest of development of the ovary or testicle), accordingly as the arteries of the inferior or superior divisions are obliterated or are of diminished calibre.

In the same manner, he explains the facts which we have considered under lateral or bisexual hermaphroditism; facts that nearly all modern authors reject as being the result of insufficient observation. Serres presumes that, in these cases, the vascular irrigation being unequally supplied to these three lateral divisions, there will result upon one side an incomplete development, and upon the other, on the contrary, a true hypertrophy; consequently a formation of female organs upon one side, and male organs upon the opposite side.

(To be continued.)

Medical News and Items.

A DANIEL COME TO JUDGMENT!—The N. Y. *Medical Record* of August 7th, in a critique upon Dr. Johann Steiner's Compendium of Children's Diseases, translated into English by Mr. Lawson Tait, perpetrates some inexcusable blunders.

The author of the critical (?) review to which we refer, objects to the phrase "exhibition of a drug," and decides that "administration" is the proper term to be employed in such a connection. If Dr. Noah Webster be considered an authority in such matters, Mr. Tait is quite correct in his use of the language. Here is the definition given in the Dictionary *verbatim* :

"3. (Med.) To administer as a remedy; as, to *exhibit* calomel."

Our critic further considers "contraction" an imperfect translation, when "contracture" should be employed. There is no such word as "contracture" in proper English medical phraseology.

The same writer would substitute for "exaggerated respirations," "accelerated" — a substitution which would entirely change the meaning of the author.

He would also change "Canton Schweiz" and "Schweiz" into "Switzerland." Now, "Canton Schweiz" no more refers to "Switzerland" than does "Borriboola Gha"! We recommend our critic to the study of geography.

Here is a sample of the mother tongue of the same reviewer: "Children predisposed to scrofula entirely on animal food," "by no means so full as the American reader would like to see," etc.

This is hypercriticism, but it is the sole remedy for hypercritics.

DISTINCTION AND DIFFERENCE.—The Cincinnati *Clinic* of Sept. 11, comments as follows upon the consolidation of the two medical journals of this city: "So far as we can judge from the present number, the JOURNAL is now an organ of the Press Association, instead of a Medical College: to an outsider this is a distinction without a difference."

The Chicago Medical Press Association, of which this journal is the official organ, represents the entire medical profession of Chicago in its corporators and stockholders. Instead, therefore, of being the organ of a single medical college, the JOURNAL AND EXAMINER is to-day the organ and representative, not only of all the regular medical colleges, but also of the other medical institutions of Chicago. This would seem to be a distinction *with* a difference.

An illustration of the failure of *both* distinction and

difference may be found in the leading article of this same number of the *Clinic*, where, out of some sixteen published formulæ, at least ten are expressed in a singular admixture of English and Latin words. Some of the latter, too, are in a bad case. "To an outsider" the *Clinic* would appear to make neither distinction nor difference between the two languages. We commend our sprightly cotemporary to the Report on Medical Literature in the Transactions of the American Medical Association for 1873.

The new County Hospital—or the two pavillions thereof now being erected—is progressing favorably. The walls of both buildings are now nearly ready to be roofed. How long it will be before the wards will be ready to receive patients, nobody knows, but we are informed that architect Cochrane promises the Board of Commissioners that the building shall be completed by mid-winter. Of course after the ward-rooms are finished, several weeks must elapse before they will be sufficiently dry to make it safe to fill them with sick people.

The Board of Commissioners of Cook County have done a very sensible thing to loan the city sufficient funds to enable the latter to thoroughly sewer and fill up to grade the streets bounding on the north and east of the new hospital lot. The Board have moved in the matter of a new hospital very slowly, but many of their late actions in the premises have been marked with commendable wisdom.

In the Mount Sinai Hospital, New York City, a new treatment for articular rheumatism is said to have been adopted, which consists "in packing the patients with blankets wrung out of hot water and changed as often as their temperature falls." The results are said to be as good as those obtained from the use of cold water and ice.—*N. Y. Med. Jour.*, Sept., 1875.

The new building for Rush Medical College will be commenced in a few weeks. The plans are now nearly complete. The building will be 68 by 82 feet on the ground; will reach nearly 80 feet toward the clouds, and will have four stories above a nine-foot basement. The style of architecture is, in a general way, Gothic. The building will be surmounted by a mansard roof, furnished with large dormer windows to give light to the upper lecture room. Each of the two lecture rooms will have capacity for seating 450 people. The new college lot is on the corner of Wood and Harrison streets, diagonally opposite the new County Hospital. We learn that it is intended to have the building completed by the time the County Hospital is ready for occupancy.

The *Chicago Journal of Nervous and Mental Diseases* is at present our only cotemporary, representative of regular medicine in this city. The reputation which it has already established in this country and abroad, is based not only upon the intrinsic excellence of its original researches, but upon its value as a mirror of neurological science. We are as justly proud of its success as its editors might well be; and take pleasure in commending its pages to our friends and subscribers.

The Board of Directors of the Central Free Dispensary of West Chicago have contracted to establish in the building of Rush College, as soon as completed, a free dispensary, to be a permanent institution. This arrangement is made to carry out the provisions of the will of the late Jno. Phillips, who bequeathed a considerable fund in trust to the trustees of Rush College, for dispensary purposes for the sick poor of Chicago. Almost the entire first floor of the College is to be set aside for the use of the dispensary. The income from the bequest referred to is to be devoted to the maintenance of this dispensary.

An exceedingly interesting paper on the existence of Motor Centres in the Cortical Substance of the Brain was read by the President of the American Neurological Association before the Chicago Society of Physicians and Surgeons on the evening of September 13th. It was received with marked attention by the unusually large number of medical gentlemen who had assembled to hear it. We shall present a brief abstract of the same in the Society Report in our next issue; and desire to state that the paper will be published *in extenso* in the October number of the *Chicago Journal of Nervous and Mental Diseases*.

DEATH OF SIR CHARLES LOCOCK.—The *London Echo* contains the announcement of the death of Sir Charles Locock, Baronet, the first physician accoucheur to Queen Victoria. He was born in 1799, and graduated in Edinburg in 1821. After going to London, he was selected, above all others, at the advice of Sir James Clarke, as physician-accoucheur. He was also a Fellow of the College of Physicians, at Edinburg, President of the Royal Medical and Chirurgical Society in 1857, was appointed Honorary President of the Obstetrical Society in 1863, and in 1864 was elected a Fellow of the Royal Society. He attended the Queen at the birth of every one of her nine children.

THE VIENNA FACULTY.—The council of Medical Professors at Vienna, at its last sitting, appointed Dr. Mayerhofer Extraordinary Professor of Gynecology, and Dr. Rosenthal of Neuropathology and Electro-Therapeutics. Dr. Wertheim will probably also be appointed an Extraordinary Professor of Dermatology and Syphilis. Drs. Kaposi, Auspitz, and Neumann, formerly *privat docenten*, have been appointed Extraordinary Professors of Dermatology and Syphilis. Dr. Carl Stoerk, *privat docent*, has been appointed Extraordinary Professor of Laryngoscopy.—*Times and Gazette*, July 24, 1875.

A NEW MEDICAL TERM.—"In an article on the correspondence of the celebrated socialist, Proudhon, Dr. Pellarin, in quoting the passage—'a while ago I thought myself convalescent, I should rather say *dévalescent*, for I am tending not towards health but towards disease,'—says that his readers (*Union Méd.*, June 10,) ought to feel obliged to him for noting this creation of so expressive a word by Proudhon."—*Union Médicale*.

The *N. Y. Med. Journal* for September, scores mercilessly the *N. Y. Med. Register* for 1875-6, for a number of defects and shortcomings, chief among which are the following: It is confused in its arrangement; it has no index; the advertisements interspersed through the book give it the appearance of a cheap business directory, and the typography is wretched.

THE PRURITUS OF VARIOLA.—Dr. Noel Guéneau de Mussey recommends the following ointment to allay the pruritus which accompanies the eruption of variola, and to prevent the patient from lacerating the skin by scratching: Bromide of Potassium, 3 grammes (45 grs.); Camphor, 30 centigrammes (4.5 grains); Cerate, 30 grammes (450 grains). To be applied daily.—*Union Médicale*, July 24; *Times and Gazette*, July 31, 1875.

By a rule recently adopted by the Trustees of the Hospital for Women and Children, hereafter *Internes* in that institution (women always) are to be appointed by competitive examination. This is as it should be.

Dr. F. C. Hotz has resigned his position as Oculist and Aurist to the Cook County Hospital. Dr. W. T. Montgomery succeeds temporarily to the service.

Dr. Wm. C. Lyman, who left town a few weeks ago afflicted, as it was feared, with a fatal malady, has returned and resumed his practice. He is as hearty, to all appearance, as he ever was.

Chicago Mortality Report for August, 1875. Reported by Dr.
BEN. C. MILLER, Sanitary Superintendent.

Accident, crushed	3	Fever typhoid	19
" drowning	12	Gastritis	3
" exhaustion	1	Gastro-enteritis	10
" fall	4	Hæmorrhage	1
" in elevator	1	Hæmoptysis	1
" by poison	2	Heart, disease of	7
" railroad	10	" fatty degeneration of	2
" shooting	1	" organic disease of	3
" suffocation	1	" neuralgia of	1
Abscesses	4	" valvular disease of	4
" lumbar	1	Hydrocephalus	14
" psoas	1	Inanition	32
Apoplexy	4	Intemperance	2
Bowels, intussusception of	1	Intussusception	1
Brain, anæmia of	1	Kidneys, Bright's disease of	2
" compression of	1	" disease of	2
" congestion of	7	" inflammation of	2
" hæmorrhage of	1	Laryngitis	1
" inflammation of	4	Liver, inflammation of	1
" softening of	3	Lungs, congestion of	3
Bronchitis	8	" hæmorrhage of	1
" capillary	3	" œdema of	1
Caries of vertebræ	1	Manslaughter	1
Cancer of breast	2	Mania	1
" of peritoneum	1	" puerperal	1
" of stomach	6	Metro-peritonitis	3
" of uterus	5	Measles	4
Child birth	3	Meningitis	15
Cholera infantum	278	" cerebro-spinal	11
" morbus	3	" tubercular	2
Colitis	2	Metritis	1
Consumption	44	Myelitis	1
Convulsions	100	Old age	12
" puerperal	2	Paralysis	4
Croup	4	Peritonitis	6
Cyanosis	2	Pneumonia	15
Debility, general	12	Pyæmia	1
Deficient development	2	Pyelitis	1
Diarrhœa	66	Rheumatism	1
" chronic	8	Scrofula	3
Diphtheria	10	Septicæmia	2
Dropsy, general	3	Synovitis	1
" ovarian	1	Syphilis	1
Dysentery	30	Syncope	1
Enteritis	22	Suicide	6
Entero-colitis	24	Tabes mesenterica	12
Epilepsy	3	Teething	13
Erysipelas	1	Tetanus	3
Exhaustion	2	Uræmia	1
Fever, intermittent	1	Uterus, hyperplasia of	1
" puerperal	2	Vitality, deficient	1
" remittent	2	Whooping cough	21
" scarlet	11	Total	986

Premature births, 10; Still births, 54. Total, 64.

MORTALITY STATISTICS.

799

COMPARISON.

Deaths in August, 1875, 986 ; in July, 1875, 1,174. Decrease, 188. Deaths in August, 1874, 1,220. Decrease, 234.

AGES.

Under one year.....	460	Forty years to fifty.....	42
One year to two.....	216	Fifty " " sixty.....	31
Two years to three.....	21	Sixty " " seventy.....	18
Three " " four.....	22	Seventy " " eighty.....	15
Four " " five.....	9	Eighty " " ninety.....	3
Five " " ten.....	20	Ninety " " one hundred.....	2
Ten " " twenty.....	24	One hundred and upwards.....	2
Twenty " " thirty.....	51		
Thirty " " forty.....	50	Total.....	986
White.....	974	Males.....	500
Colored.....	12	Females.....	486
		Married.....	172
		Single.....	814
Total.....	986	Total.....	986

NATIVITIES.

Austria.....	1	England.....	9	Sweden.....	4
Belgium.....	1	Germany.....	64	Switzerland.....	1
Bohemia.....	9	Hungary.....	1	Wales.....	1
Canada.....	4	Ireland.....	59	West Indies.....	1
Native—Chicago.....	169	Italy.....	1	Unknown.....	7
Foreign, ".....	528	Norway.....	7		
U. States, other parts.....	110	Nova Scotia.....	1	Total.....	986
Denmark.....	3	Scotland.....	5		

Deaths daily, 31 5-6. Mean thermometer, 68.6°. Rain fall, 3.29 inches.

MORTALITY BY WARDS.

Wards.	No. Deaths.	Pop. in 1874.	Percentage.	Wards.	No. Deaths.	Pop. in 1874.	Percentage.
1	4	5,725	one death in 1,431	11	20	14,022	one death in 701
2	4	4,830	" " 1,207	12	25	16,792	" " 672
3	22	14,861	" " 675	13	25	17,892	" " 716
4	21	15,361	" " 732	14	38	16,720	" " 440
5	33	20,078	" " 609	15	180	45,545	" " 253
6	113	35,916	" " 318	16	56	21,922	" " 448
7	104	31,722	" " 305	17	54	20,777	" " 385
8	72	29,143	" " 404	18	49	21,392	" " 437
9	42	31,654	" " 754	19	12	4,677	" " 389
10	19	17,385	" " 915	20	13	8,995	" " 692

Ratio of deaths to population in 1874, one death in 402.

No. deaths in Wards.....	906	Manslaughter.....	1
Accidents.....	35	Police Station.....	1
County Hospital.....	11	St. Joseph's Hospital.....	1
Foundlings' Home.....	15	Suicides.....	6
Hospital Alexian Bros.....	4		
Hospital for Women and Children.....	1	Total.....	986
Mercy Hospital.....	5		

ANNOUNCEMENTS FOR THE MONTH.

MONDAYS.

SOCIETIES.

Mondays, Oct. 4 and 18—Chicago Med. Society, regular meetings at Gault House, 8 P. M.
Mondays, Oct. 11 and 25—Chicago Society of Physicians and Surgeons, regular meetings at Grand Pacific, 8 P. M.

CLINICS. *Every Monday.*

At Eye and Ear Infirmary, (Peoria and Adams Sts.) 2 P. M.—Prof. Holmes.
 At Chicago College, 2 P. M., *Gynecological*—Prof. Merriman.
 At Central Dispensary (239 W. Van Buren St.), 2 P. M., *Gynecological*—Dr. Adolphus;
 3 P. M., *Medical*—Dr. Bridge.
 At Mercy Hospital, 2 P. M., *Medical*—Prof. Johnson.

LECTURES *Every Monday.*

At Rush College (18th and Arnold Sts.), 8½ to 12½ o'clock—Profs. Gunn, Miller, Freer and Powell; 4 to 6—Profs. Lyman and Etheridge.
 At Chicago College (from Oct. 4th), 8½ to 12½—Profs. Jewell, Isham, Haines and Bond; 3 to 6—Profs. Davis and Nelson, Andrews and Quine, and Roler.

TUESDAYS.

SOCIETIES.

Tuesday, Oct. 12th—Academy of Sciences, regular meeting, 8 P. M. (263 Wabash Av).
Tuesday, Oct. 26th—Medico-Historical Society, regular meeting, 8 P. M.

CLINICS. *Every Tuesday.*

At County Hospital, 2 P. M., *Medical*—Prof. Johnson; 3 P. M., *Surgical*—Prof. Powell.
 At Chicago College, 2 P. M., *Gynecological*—Prof. Roler.
 At Mercy Hospital, 2 P. M., *Medical*—Prof. Hollister.

LECTURES. *Every Tuesday.*

At Rush College, 8½ to 12½—Profs. Gunn, Miller, Allen and Rea; 4—Prof. Lyman.
 At Chicago College, 8½ to 12½—Profs. Jewell, Isham, Merriman and Bond; 3 to 6—Profs. Davis and Nelson, Andrews and Hatfield, and Byford.

WEDNESDAYS.

CLINICS. *Every Wednesday.*

At County Hospital, 2 P. M., *Ophthalmological*—Dr. Montgomery; 3 P. M., *Gynecological* [—Prof. Fitch.
 At Chicago College, 2 P. M., *Gynecological*—Prof. Nelson.
 At Woman's Dispensary (229 30th St.), 11 A. M., *Gynecological*—Drs. Hurlbut and Jackson; 2 P. M., *Electrical*—Dr. P. S. Hayes.
 At Central Dispensary, 3 P. M., *Medical*—Dr. Bridge.
 At Mercy Hospital, 2 P. M., *Surgical*—Prof. Andrews.

LECTURES. *Every Wednesday.*

At Rush College, 8½ to 12½—Profs. Hay, Freer, Allen and Rea; 4 to 6—Profs. Lyman and Etheridge.
 At Chicago College, 8½ to 12½—Profs. Hollister, Isham, Haines and Bond; 3 to 6—Profs. Davis and Curtis, Jones and Quine, and Roler.

THURSDAYS.

CLINICS. *Every Thursday.*

At Eye and Ear Infirmary, 2 P. M.—Prof. Holmes.
 At Chicago College, 2 P. M., *Gynecological*—Prof. Merriman.
 At Central Dispensary, 2 P. M., *Gynecological*—Dr. Adolphus.
 At Mercy Hospital, 2 P. M., *Medical*—Prof. Johnson.

LECTURES. *Every Thursday.*

At Rush College, 8½ to 12½—Profs. Gunn, Miller, Allen and Rea; 4 to 6—Profs. Ross [and Lyman.
 At Chicago College, 8½ to 12½—Profs. Hollister, Isham, Merriman and Bond; 3 to 6—Profs. Davis and Nelson, Andrews and Hatfield, and Byford.

FRIDAYS.

CLINICS. *Every Friday.*

At County Hospital, 2 P. M., *Medical*—Prof. Johnson; 3 P. M., *Surgical*—Prof. Powell.
 At Chicago College, 2 P. M., *Gynecological*—Prof. Roler.
 At Mercy Hospital, 2 P. M., *On Dis. Eye and Ear*—Prof. Jones.

LECTURES. *Every Friday.*

At Rush College, 8½ to 12½—Profs. Gunn, Freer, Allen and Rea; 4 to 6—Profs. Holmes and Etheridge.
 At Chicago College, 8½ to 12½—Profs. Hollister, Quine, Haines and Bond; 3 to 6—Profs. Jones and Curtis, Andrews and Quine, and Roler.

SATURDAYS.

CLINICS. *Every Saturday.*

At Rush College, 2 P. M., *Surgical*—Prof. Gunn; 3 P. M., *Diseases of the Brain and Nervous System*—Dr. Hay.
 At Woman's Dispensary, 11 A. M., *Gynecological*—Drs. Hurlbut and Jackson; 2 P. M., *Electrical*—Dr. P. S. Hayes.
 At Chicago College, 2 P. M., *Gynecological*—Prof. Nelson; *Surgical*—Prof. Andrews or, Isham; 3 P. M., *Medical*—Prof. Davis.

LECTURES. *Every Saturday.*

At Rush College, 8½ to 12½—Profs. Hay, Miller, Freer and Rea.
 At Chicago College, 8½ to 12½—Profs. Hollister, Quine, Sherman and Hatfield; 3 to 6—Profs. Davis and Nelson, Andrews and Quine, and Byford.

☞ The schedule of Woman's Hospital College had not reached us on going to press.

THE
Chicago Medical Journal
AND
EXAMINER.

VOL. XXXII. — NOVEMBER, 1875. — No. 11.

Original Communications.

INFANTILE HÆMORRHAGE.

BY HENRY M. LYMAN, M.D.,

PROFESSOR OF CHEMISTRY IN RUSH MEDICAL COLLEGE, AND ONE OF THE PHYSICIANS TO
THE COOK COUNTY HOSPITAL, CHICAGO.

(Read before the Chicago Medical Society, Oct. 18, 1875.)

A few years ago I attended one of my patients in her second confinement. Her first child had been a very healthy, vigorous boy, in this respect resembling the constitutional perfection of both parents. To my astonishment this second son was one of the most unpromising little wretches ever born. He was long and lean as a monkey, had an aphthous mouth from the very moment of delivery, and was, moreover, completely cyanosed. It seemed impossible that the child could live, but he did linger along till the fifth day after delivery, when he began to have convulsions, and to pass blood with his urine. The case was regarded as evidently hopeless, especially after blood had been vomited once or twice; but, for the sake of appearing to do something, I prescribed a drop of turpentine in mucilage every half hour. To the great surprise of every one the little fellow began to improve under this treatment. He passed blood only

once more, and in about one week was quite out of danger. He passed through the whole period of lactation and dentition without illness of any kind, and is now as wholesome and active as any child of four years can be.

A few months after this experience another of my patients, a primipara, was delivered, at full term, of a female child. Both parents were in perfect health, and the child presented all the appearance of usual vigor. About twelve hours after delivery, the nurse reported hæmorrhage from the umbilical cord. In my absence she had applied a fresh ligature. I examined the cord, and found that it was oozing blood. I applied a third ligature, and there was no more bleeding from that source. I was for an hour or two very much annoyed by my supposed carelessness in the first application of the ligature, when my feelings suddenly assumed a very different character in consequence of a profuse discharge of blood from the rectum of the infant. An injection of rhatany checked this flux, but it was soon followed by hæmorrhage from the bladder. I now prescribed turpentine, as in the former case, but without any success. Blood was vomited from the stomach; it oozed from the ears; one eye became bloodshot; purpuric spots appeared upon the skin; the cranial vault enlarged until the child assumed the well known appearance of a hydrocephalic infant; and death occurred about twenty-six hours after birth.

This last case furnishes a typical example of the disease called *purpura hæmorrhagica* in a new born infant. It cannot be considered a very common disease, for in a list of five hundred births these are the only well marked cases that have occurred within my experience. In three other instances, it is true, I have seen children, a few hours after birth, vomiting mucus streaked with blood; but, without any other hæmorrhagic accident, they did well. It may be doubted whether the first was a case of purpura, since there was such a degree of cyanotic obstruction to the circulation of blood, that the internal viscera might very easily have become congested to the

hæmorrhagic point through the operation of mechanical causes alone. The relief which so soon followed the occurrence of hæmorrhage seems to favor this supposition. But in the second case it was very evident that the difficulty was not mechanical. The greater the depletion of the vascular system, the greater the extravasation of blood. There was no autopsy to verify the hypothesis, but I am convinced that before death the cavity of the arachnoid was filled with blood. Paralysis did not occur, but it does not occur in cases of infantile meningeal hæmorrhage, in consequence of the yielding condition of the cranial vault. The condition of things is, in this respect, identical with what is observed in cases of ordinary hydrocephalus.

I cannot contribute anything new to a comprehension of the nature or causes of purpura. It is a not uncommon concomitant of many different diseases. It is sometimes caused even by the administration of drugs. Virchow saw it in a cancerous patient while taking iodide of potassium. Ricord saw it produced in a syphilitic patient, whenever he was treated with that drug. (Reynolds' System of Medicine, vol. I, p. 760.) I have also seen the same thing in the case of a young man who was taking scruple doses of iodide of potassium during the process of syphilitic necrosis of the bones of the cranium. The eruption, which had the appearance of hæmorrhagic measles, was located principally upon the legs and ankles, and it always disappeared within three or four days after ceasing to administer the drug. This fact I verified by a number of experimental trials.

I will not stop to review the various theories of purpura which have been advanced. It is only necessary to keep in mind two principal factors: the state of the blood and the state of the blood vessels. A deficiency of fibrine and a dissolution of the red corpuscles, have sometimes been observed, but such cases are so comparatively exceptional, that the author of the article on purpura, in Reynolds' System of Medicine, declares that there is

no evidence of its being a disease of the blood. That the extravasation is preceded by an alteration in the condition of the walls of the blood vessels, is undoubtedly true. Amyloid degeneration of the capillary walls, was found by Wilson Fox, (*System of Medicine*, p. 760), in a fatal case of purpura, in a syphilitic subject. The experiments of Brown-Sequard, Vulpian and others, have shown that certain injuries of the nervous centres may produce congestions of internal viscera, and even hæmorrhagic effusions from the capillaries in various parts of the body ; and my own experience leads me to believe in the existence of a purpura which may depend upon a disturbance of the innervation of the smallest arteries and veins. I saw a lady, last winter, about fifty years of age, of an exceedingly nervous temperament, and for many years subject in a slight degree to that form of disease called rheumatic gout or rheumatoid arthritis. She had a red tongue, and was suffering with neuralgic pains in different parts of the body. One day, after several hours of atrocious pain along the track of the anterior tibial nerve, a purpuric eruption appeared over the seat of pain, midway between the knee and the ankle. This seemed to relieve the neuralgia, and the patient convalesced as the eruption faded away. Dr. S. Weir Mitchell has reported several similar cases. These, however, are not to be considered cases of general purpura ; they are examples of a local lesion. (*Am. Jour. Med. Sciences*, July, 1869, p. 121.)

In view of the possibilities of injury to the brain in cases of difficult labor, it does not seem incredible that in the act of parturition, damage might be inflicted of such a nature that it would only reveal itself by a hæmorrhage occurring a few hours later. When one reflects also upon the well known fact of intra-uterine disease of the nervous system, producing congenital deformities of a paretic or paralytic character, it does not seem unreasonable to suppose that an intra-uterine nervous lesion might be the cause of the extravasation of blood which occasionally commences in the intestinal canal

of the fœtus before birth. This hypothesis would serve to explain the case reported by Dr. Bridge (*Chicago Medical Journal*, July, 1875, p. 487), as well as the cases of hæmorrhage from ante-natal ulcerations of the duodenum, reported by Dr. Spiegelberg (*Am. Jour. Med. Sciences*, Jan., 1870, p. 248). A thorough examination of the nervous system, after death, is much to be desired in such cases.

Very interesting in this connection are the phenomena which follow the application of snake poison to the capillaries. It had long been noticed that purpuric extravasations and passive hæmorrhages from the mucous surfaces of the body, are among the sequelæ of poisoning by snake-bites; and S. Weir Mitchell "observed upon applying the snake-poison to the mesentery of rabbits, that red blood capsules immediately appeared on the outer walls of the capillaries, accumulating in such masses as to compress the vessels, and impede or completely obstruct the circulation. Within five or ten minutes the entire field of vision becomes covered with extravasated blood, the origin of which can only be referred to some alteration in the walls of the vessels." (Ziemssen's *Cyclopædia of Medicine*, Vol. III, p. 549.) It would be interesting to have the nature of this "alteration in the walls of the vessels" made clearer than it is at present. It is not very probable that it consists in a solution of the protoplasmic substance of the capillary walls; and, in view of the lack of certainty regarding the existence of a nervous apparatus for the capillaries, it is imprudent to assert positively that it is due to an altered innervation of these vessels.

The hæmorrhages which often occur in the course of pyæmia or in the hæmorrhagic forms of acute infectious disease, are all, doubtless, produced in a similar manner. The injection of putrid animal fluids into the veins, will occasion the same result. A specific contamination of the blood seems, then, most likely to be the primary cause of purpuric hæmorrhage. The occurrence of such hæmorrhage in a new-born child should, therefore, direct

our attention to the search for possible causes of blood-poisoning ; and this brings me to a fact not yet mentioned in the history of my cases. They both occurred during the prevalence of an epidemic of puerperal fever in this city. There were no puerperal accidents in the case of the mother of the first child ; but, as we have already seen, that was not a case of undoubted purpura. It may have been a simple hæmorrhage from cardiac obstruction to the circulation. In the second case, however, the child was scarcely dead when the mother experienced a violent chill, which was followed by pelvic cellulitis, that confined her to bed for three months.

During the same epidemic the mother of one of the children to whom I alluded above as having vomited mucus streaked with blood, had a milk-leg following her confinement, but the child presented no other appearance of departure from the most perfect health.

I am not in possession of data sufficient to warrant me in the assertion of a direct connection between puerperal disease on the part of a mother and purpuric hæmorrhage on the part of her offspring ; yet, when we remember how often, comparatively, we see the mother die of child-bed fever, and the infant of erysipelas, it is impossible to avoid the conclusion that there may be also a certain degree of community between the causes of the various diseases which attend child-birth, and the causes of infantile hæmorrhage.

THE following verdict of a coroner's jury in Exeter, England, commends itself to the consideration of medical gentlemen in this city : " Congestion of the lungs, accelerated by an overdose of opium innocently administered by her mother from a *modern* teaspoon, containing two drachms, instead of from a teaspoon of older date, containing one drachm."

Verbum sat sapientibus !

THE MICROSCOPE IN DAILY PRACTICE.

(THIRD PAPER.)

BY I. N. DANFORTH, M.D.,

LECTURER ON PATHOLOGY IN RUSH MEDICAL COLLEGE, CHICAGO.

It is one thing to *buy* a microscope ; it is quite another thing to make it practically valuable in the practice of medicine. There are two classes of extremists with respect to the microscope ; one class ridicule it as of no value, the other repose in it a profound faith and regard it as well nigh infallible. These two classes are about equi-distant from the truth, but of the two I prefer the former, since it is generally easier to remove a reasonable and *reasoning* skepticism than to curb an unreasoning and unreasonable faith—and, I may add, far more satisfactory. To the physician in every day practice, the microscope is mainly useful as an aid to diagnosis ; in this respect, it takes its place with the ophthalmoscope, the stethoscope, the laryngoscope, the otoscope, and the rest of the “scopes” that are or are to be. But the microscope is, or ought to be, more than this ; as Stricker tersely puts it, it “is a means of research,” and every physician who owns a microscope should so regard it and so *use* it. The young men of our profession in the Northwest are as capable of original research as are the young men of England, France or Germany. It is not to our credit that we are compelled to go abroad for most of the new discoveries in physiology and pathology. Americans make the best microscopes and the fewest discoveries in medicine ; Germany the poorest microscopes and the most discoveries. How natural it is for us to hang our faith in matters relating to histology upon the Germans ; but in doing this we export all the compliments.

It is not very difficult, however, to understand why so many of our students and graduates let the microscope severely alone. I am persuaded that it is largely due to the fact that microscopy is commonly looked upon as a

very mysterious as well as a very expensive piece of business. It seems to be generally believed that a large array of costly instruments and apparatus is necessary, in addition to a costly microscope—so that it is by no means singular that the student or physician of moderate means should look upon the microscope as something *desirable* but not *attainable*.

In the two preceding issues of the JOURNAL AND EXAMINER I tried to show that a good microscope need not be a costly affair; in this present paper I propose to show that it does not demand a very great outlay of *money to get ready* to use the instrument.

The specimens, both healthy and morbid, which will present themselves to the physician for examination may be divided, for convenience, into three classes:

- (a) Fluids.
- (b) Semi-solid structures.
- (c) Solid structures.

For the examination of all sorts of specimens, slips of glass of convenient size will be required. These glass slips or slides are now universally made three inches long by one inch wide, and they can be purchased of any dealer in "microscope findings" at about fifty cents per dozen. A uniform size has been adopted so that *all* slides will fit securely in *all* cases or cabinets; it is of course merely a matter of general convenience; we all agree to uniformity in this matter just as we all agree to a uniform size of screw for objectives and other accessories. It is not, however, necessary to buy the ground slides. A thin pane of common window glass, selected with some care, may be cut into slides, and will answer every purpose, with the exception of now and then a slide that will contain "flaws," like air bubbles or scratches or other irregularities. But these slides made of window glass, will answer every practical purpose. "Covering" glasses will likewise be required from the outstart. These are round or square pieces of very thin glass prepared especially for the purpose of covering the

object, after it has been placed upon the glass slide, the design being to flatten the specimen, and thus cause it to assume a uniform degree of thickness. These thin circles or squares of glass are kept by the dealers, and they generally cost about forty cents per dozen for common sizes, as five-eighths or three-quarters of an inch diameter or square, as the case may be. But here, again, for ordinary use, a substitute may be employed which is vastly cheaper and far more durable. Let the student procure a piece of clear mica (from any stove dealer) and carefully split it into thin laminæ; then let each lamina be cut into squares or circles as may be desired. The objection to mica is, that it is less clear than glass, and that it is likely to show striæ or scratches, corresponding with the various laminations. But the student will shortly become accustomed to these defects, so that he will scarcely notice them at all; in other words, they practically cease to be defects, just as blemishes of speech or feature cease to be repugnant as we acquire familiarity with them.

(a) *The Examination of Fluids.* The microscopic examination of the fluid substances which come under the notice of the physician, really means the study of their solid portions, which are sometimes amorphous, sometimes crystalline, sometimes cellular. The mode of procedure is very simple, and is essentially the same for all fluid products, if the specimen consists of as much as a couple of fluid drachms. Pour the specimen into a conical glass, like an old fashioned wine glass, cover it carefully to prevent the access of dust, and allow it to remain until the sediment falls to the bottom, which will take from six to twenty-four hours, according to the copiousness and density of the sediment.

For the purpose of gathering the sediments of urine, serous discharges, etc., conical glasses of four or five ounces capacity are sold by the dealers in microscope findings and chemical wares; they are very convenient, but not *necessary*. An old fashioned wine glass, which

can be found in almost any house, or country store, answers equally well, and costs far less; in the absence of this, a test tube will answer almost as well, and as a matter of absolute fact, in nine times out of ten, a sufficient quantity of the sediment can be obtained, if the specimen is merely allowed to stand in an ordinary druggist's phial.

After precipitation has taken place, the next thing is to get a drop of the precipitate in shape for examination. For the removal of a minute quantity of the deposit from the bottom of the conical glass, or other vessel, a *pipette* is necessary. This is merely a glass tube, about three-sixteenths of an inch in external diameter, and ten or twelve inches long. These tubes are generally drawn to a capillary point, by simply heating them in the flame of an alcohol lamp—an operation which the merest tyro can easily perform. Then take the tube between the thumb and second finger, and close the upper orifice with the index finger, so as to prevent the escape of air; plunge the lower end of the pipette to the bottom of the glass containing the specimen, and slightly raise the index finger from the upper orifice; a few drops of the sediment will flow into the tube, which should then be quickly closed again with the finger; now raise the tube, still tightly closed, from the glass, wipe the adhering fluid from its external surface, and allow a single drop of the contained sediment to flow upon a glass slide, previously prepared for its reception. If the student does not happen to possess a pipette, a rye or wheat straw, or the stem of a common clay pipe can be made to answer almost as well. "Where there is a will there is a way"—a bit of philosophy which, I am bound to confess, is not exactly original with me.

Having placed the specimen upon the glass slide, the next step is to apply the thin glass or mica "cover"—and it requires some little tact to do this, without including a colony of pestering air bubbles.

For the application of the covering glass, as well as

for many other purposes in connection with microscopy, a small sharp-pointed, curved forceps, like that represented in the accompanying illustration (Fig. 1), will be



Fig. 1.

found extremely useful. They can be obtained for about 50 cts. each of Messrs. Johnson & Lund, dealers in dental supplies, of this city. Those with comparatively weak springs should be selected, as it is very tiresome to the fingers to hold the points in firm contact if the resistance is too great. The glass cover is applied in the following

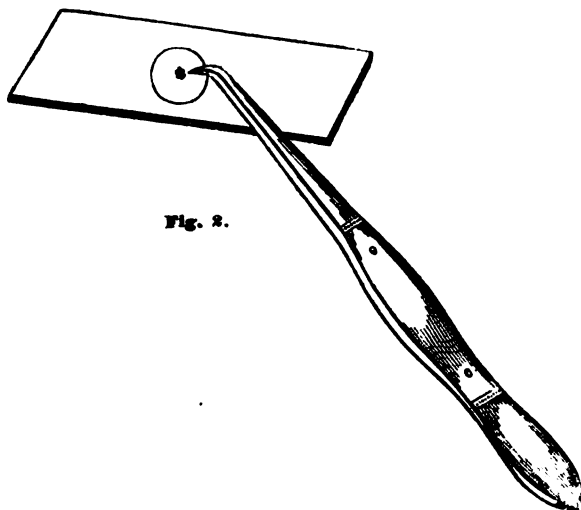


Fig. 2.

manner : Take the forceps as represented in the illustration (Fig. 2), and, with the curved points of the instrument, seize the "cover" near its margin, place the opposite (or free) margin in contact with the slide, and allow the cover to descend slowly and gently upon the specimen to be examined, until it is nearly in contact with the slide ; then allow it to fall of its own weight. The specimen will be included between the slide and the cover, and the effect of the latter will be to spread it out

in a thin film of uniform thickness. As the covering-glass falls, a portion of the fluid will be forced out around the margins; this must be absorbed by a fragment of blotting paper, or a bit of old muslin. The specimen is now ready for examination, and the student should proceed to study it, slowly, carefully, and *thoughtfully*. I particularly insist upon the importance of comparing the microscopic appearances of the morbid specimen with the history of the case. In renal diseases this is *imperative*, if the diagnosis and prognosis are to be of any *certain* value. No thoughtful, careful physician trusts to his stethoscope, or his ophthalmoscope, or his laryngoscope *alone*; no more can he trust to his microscope *alone*. Many physicians, who ought to know better, expect more of a microscopist who has *not* seen the patient than they do of the stethoscopist who *has*. This is simply the perfection of absurdity. One instrument increases the natural power of the eye, the other increases the natural power of the ear; the one is no more infallible than the other. Both are valuable in exact proportion to the experience and good judgment with which they are administered, and both are comparatively valueless in the hands of beginners.

When a specimen consists of a less quantity than a couple of fluid-drachms, it should be placed in a small test tube until the deposit falls to the bottom. In this manner the solid portion of a very small quantity of fluid can be collected and examined without difficulty. It is not the province of this paper to inform the student *what* he is liable to find in the many varieties of fluid specimens which may come before him, nor the pathological import of the microscopic appearances. These are matters that will be taken up in their appropriate places, later in the series.

74 SOUTH MORGAN STREET.

Correspondence.

QUINCY, ILL., July 19th, 1875.

EDITOR CHICAGO MEDICAL JOURNAL AND EXAMINER—

DEAR SIR:—In the *American Journal of the Medical Sciences* for this month, in an article on "Ununited Fractures," by Dr. John H. Packard, of Philadelphia, reference is made to a case reported by Mr. Annandale in the *British Medical Journal* for January 9th, 1875, and subsequently reported in the *Monthly Abstract of Medical Science*, March, 1875, page 127.

A case of Colles' Fracture, resulting in great deformity of the forearm, occurred in this city eight years ago; the operation of resection subsequently performed for its relief by Dr. William A. Byrd, very closely resembling that which Dr. Packard describes in the first of his two cases. Dr. Byrd's operation was performed November 1st, 1873, and an account of it was published, with plates, in the *Richmond and Louisville Medical Journal*, for October, 1874.

The *Monthly Abstract* for March, 1875, contains Mr. Annandale's report, but not until the April number of that publication, and then only when the attention of the editor had been called to the matter, was Dr. Byrd's report noticed. Now comes Dr. Packard, who refers again to Annandale, but seems to have no knowledge whatever of the operation performed and reported by an American surgeon several months before. What is the reason for all this? Do our brethren in the East imagine that in the East only can wisdom be found? Is it not possible at least, that had the case reported by Dr. Byrd occurred in one of the Atlantic States (or say in the city of Philadelphia), Dr. Packard would have remembered something about it, and Dr. Hays would not have omitted and utterly ignored it, in making up his *Abstract*, until in some sort compelled to give it the notice it deserved?

Reports of Societies.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, Sept. 13, 1875.

(Reported by E. WARREN SAWYER, M.D.)

President, Dr. Bevan, in the chair.

Prof. J. S. Jewell presented to the Society an elaborate and interesting paper on motor centres in the cerebral cortex. The entire paper should be read in order to learn the interesting manner in which the subject is analyzed, as well as the views of the author, but in our report we are limited to a very imperfect abstract.

After speaking of the importance of the subject, and stating that physiologists are divided on the question of centres in the cortex, the writer says, "we do not now so much need new experiments in many departments of physiology, as we do patient, critical reflection on those we now have."

"The opinion that the cortex of the brain contains circumscribed spots, which are more or less directly concerned in the movements of definite groups of muscles, has an experimental basis. The experiments have been of two kinds." First, mutilating a considerable portion of the cortex of some adult animal's brain, as has been done by experimenters in various ways—removal of the portion, destroying the portion by means of corrosive chemical substances, or by injecting lycopodium powder into some small vessel which is supplied to a certain region of the brain, thus destroying that region. Second, excitative experiments, in which the integrity of the part excited was not destroyed. It was this latter class of experiments that formed the especial subject of the reader's remarks: "The establishment of *one* well-defined motor centre will involve the principle as truly as would a dozen."

The two experimenters who have done most in this direction, are Hitzig, of Berlin, and Ferrier, of London,

which fact, if true, would militate against the local action of the currents employed in such experiments of Hitzig, Ferrier, and others. This particular objection is made by Dr. Austin Flint, Jr., of New York." In answer to this objection, the reader says: "In this case, if we admit that wide diffusion of the current took place, we may suppose that the peripheral end of the divided facial nerve was excited, and in this way the contractions were produced, certainly they could not have arisen from an excitation of the nucleus for the facial. But if the diffusion was so wide-spreading in its action, as it must have been in this instance, it is difficult to see why both sides of the face did not act, and indeed, why more general convulsions did not occur, instead of being so nearly limited to the facial as they were, that is, if such limitation was a fact."

The reader then detailed the objections raised by Brown-Séquard, in an article in the *Boston Medical and Surgical Journal*, July 29, 1875. The first objection of this eminent physiologist is, "that the psycho-motor centres, even if we admit their existence, are not situated in homologous parts of the brains of different animals, as they ought to be if they really existed. This objection, Dr. Brown-Séquard thinks to be fatal to the hypothesis of definite cortical centres." In answer to this, the reader said: "if this objection is well-founded, it would be a serious, but, even then, not necessarily a fatal one, so it seems to me. But I am not ready, as yet, to admit it as being well founded, until still more careful studies are made, on the one hand, in respect to equivalent convolutions in the brains of different animals, as compared together; and, on the other hand, until the location of motor centres, if they exist, shall have been made the subject of a vastly greater number of experiments, and from a more enlightened stand point, than it has been possible to occupy up to this time. * * * Especially will it become apparent, that after all that has been done by Vrolik, Reichert, Leuret, and Graliolet, Owen, Hux-

such as a more profound study of its anatomy, I believe, will reveal in the future; and, because of the positive errors that now prevail on these subjects, that the progress of future research is destined to clear away, and especially on account of the want hitherto of thoroughness in working up the *ante*, and especially the *post-mortem* histories of brain diseases. I assert, in the most unhesitating manner, that the lists of cases, say, of cerebral hæmorrhage, which are collected by such writers, for example, as Sintrac, and on which reliance is placed by Brown-Séguard, useful as they are on many accounts, are for all purposes of exact study and reliable inductions nearly worthless." The reader quoted a case, taken at random from Sintrac's book, to show how incompletely it was reported: "Male, fifty years. May; delirium, loquacity, irregular movements of the members, (dyspnoea), death. Pia mater adherent to the brain, *at the anterior and inferior part* of the right middle lobe cortical layer, *to the extent of two convolutions*, filled with grumous blood, mixed with cerebral tissue. Subjacent medullary substance intact. Brain soft. Pleuritic exudations, nodules of pulmonary hepatization, pericarditis, softness of the heart." "Now what shall we say of conclusions based on a study of such cases as this one? Is it any wonder that if they were relied on, the observer might reach such a conclusion as Dr. Brown-Séguard has done? What part of the brain proper was diseased in the case I have quoted? Why, 'the anterior and inferior part of the right middle lobe,' and beside this, 'the brain was soft.' But the point in these remarks is this, that it is by the study of a collection of similar cases that Dr. Brown-Séguard reaches the conclusion that 'the symptoms in brain diseases are not in the least dependent on the seat of the lesion;' and conclusions based on a study of such cases are to be placed in the scale against the results of careful physiological experiments, conducted on limited parts of the living, healthy brain!"

In conclusion, the reader said: "I am persuaded that

had been unnatural delivery in one only, and in not one had there been syphilis. Such tumors were not seen, as a rule, for a fortnight after birth, probably because the mother does not usually wash the child before that time.

Mr. Clement Lucas related the case of a child with a tumor of the buccinator muscle, which appeared shortly after birth and disappeared under treatment by mercurial inunction. At the age of six months the child presented syphilitic symptoms.

Dr. Taylor remarked that Mr. Thomas Smith mentions one case of sterno-mastoid tumor which was observed immediately after birth.

The President (Sir Wm. Jenner), believed that the non-discovery of the tumor until a fortnight after birth, was to be explained by the custom of intrusting the dressing of the infant to the nurse.

The case related by Dr. Taylor so nearly resembles the one observed by me in most of its features that I cannot but regard the two as identical in character. But, while in the former there was abundant evidence of the presence of a syphilitic taint, in the latter there was none, both parents having been, and still being healthy. The child, too, now over ten months old, has been free from any skin disease and remarkably healthy. Mr. Arnott in the discussion alluded to, stated that he had seen "many cases," and that there had been no history of syphilis in any of them. So far, therefore, as we have any evidence upon the subject, I think we may regard the presence of syphilis, when it occurs, as accidental and not as an etiological factor.

Histologically, these enlarged indurations seemed to occupy a doubtful position. Being confined wholly to the muscle, they must, probably, be regarded as either hypertrophic or inflammatory in character. They can hardly be considered inflammatory, I think. Dr. Taylor says, positively, that in the case examined by him there were no evidences of inflammation. If the part were acutely inflamed there would be present other symptoms

case of ruptured uterus, in which the patient recovered in the first instance, dying from a repetition of the accident in a subsequent labor. The remarkable points of the case were the recovery after the first rupture, and prolapse of a portion of omentum through the rent, which was subsequently removed by the process of supuration.

Dr. Senn, of Milwaukee, then presented two pathological specimens: excised head of the femur, and tibia and fibula at the ankle joint, relating the cases.

The regular discussion of the subject reported on, regarded immovable fracture dressings, in which all the members took part. Numerous varieties of permanent dressings were mentioned—the general opinion prevailing that in ordinary fractures, as an immediate dressing, they were somewhat objectionable, while in some special cases, and as a later means of support, they might be used to great advantage.

The committee on place and time of next meeting, reported in favor of Hartford, Tuesday, October 19. Subject for discussion: "The duties of a physician in natural labor."

On motion, the Society adjourned according to the report of committee.

INFLUENCE OF BROMIDE OF POTASSIUM ON THE MENSTRUATION. *Cordes*.—A delicate but healthy young lady, who menstruated every three weeks, was given half a grain of bromide of potassium daily for one week preceding the expected menstruation. Whereupon the menses appeared every four weeks, but they returned in tri-weekly intervals as soon as the bromide was discontinued.—*Bull. de Thérapie; Memorabilien*, xx. 7.

tion. One gramme of chloral given. The patient had now taken four grammes in an hour and a half.

“After the last dose she fell asleep again profoundly. The sleep was prolonged till 3 o'clock, at which time dilatation was complete, and the expulsive pains commenced and delivery was rapidly terminated without pain. Recovery complete.”

“Case X. Rosalie B., æt. 25 years, primipara, in perfect health, arrived at full term without a single accident. The day previous, 3 P. M., she began to experience the first pains, which lasted throughout the night, causing her to cry out. At 8.30 A. M. on the day following, the cervix was completely dilated, the head, fixed, was engaged in the superior strait in the first position.

“The contractions were irregular and weak. The labor had not progressed since 5 A. M. Four grammes of chloral were given; the first two at once, and the last two separately, a quarter of an hour apart; after the second dose the patient slept and had only one contraction, which did not awaken her, between that and the third dose. After the fourth dose, powerful contractions came on very regularly every five minutes, without arousing the patient, and at the end of thirty-five minutes delivery was completed without her remarking it. At the moment of delivery she pretended not to have suffered and then fell asleep and slept five hours, waking perfectly refreshed. The sequences were as usual, and she left the hospital on the tenth day after confinement.”

“Case XII. Céleste K., æt. 24 years, primipara, entered the hospital Dec. 4, 1873; is at full term, which she reached without any accident. The pains began two days previous, and waters had escaped twelve hours previously.

“This woman, very nervous, was continually crying out and tossing about on the bed; she said she suffered much; contractions irregular; cervix completely dilated, breech presentation; first presentation at the superior strait.

"8.40 A. M. Two grammes of chloral given at once.

"8.55 A. M. No effect ; two more grammes given.

"9.05 A. M. No effect ; perhaps there is a slight tendency to sleep and the cries a little less violent, but the contractions are not at all modified. One gramme more given.

"9.15 A. M. A little tendency to sleep. One gramme more given.

"9.25 A. M. No complete sleep yet ; the seventh gramme given.

"9.45 A. M. After the last dose the patient fell into a profound, very calm sleep ; the pulse which had been 120 beats per minute, fell to 80 ; respiration calm, but the uterus did not contract.

"9.50 A. M. Contractions violent, without arousing the patient. From this moment the contractions became regular and powerful ; at first every six minutes, then every five minutes, and the delivery was consummated without intervention at 11.10 A. M. The patient was not conscious one moment. She slept till 2 P. M., at which time she awakened and said she remembered nothing, and had not suffered any. Recovery was rapid."

An attentive reading of the above given cases, will convince any one that this drug administered as shown, places in the obstetrician's hands a help scarcely second to chloroform, and one free from the objections of the latter, which every one knows "prolongs the labor" by rendering the pains less effective. The author claims for this drug, that it not only does *not* protract labor as chloroform does, but it positively *increases* pains, steadies irregular, ineffectual contractions, and at once converts them into forcible, expulsive uterine efforts. To carry conviction still more forcibly to his readers, the writer details two experiments, on bitches, performed by M. Pellissier. The dogs were fastened to the operating table, the abdomen opened and at first the contact of air sufficed to produce contractions of the unstriped fibres of the intestines and uterus. Pinching these or-

gans produced violent muscular contractions. Into one animal chloral was injected till profound sleep was produced. "Anæsthesia was complete; the nose and tongue were pinched without producing a single movement." Slightly pinching the uterus produced contraction promptly. Into the other bitch laudanum was injected subcutaneously; soon "very profound sleep, with violent dyspnœa, was produced." Upon pinching, the intestine and uterus contracted, "but they had to be observed with the *utmost attention* to see these contractions, since they were *scarcely perceptible*." After these experiments, both animals recovered; this fact is mentioned purposely, to assure any incredulous reader that these experiments were not prosecuted on moribund subjects.

Obstetrical anæsthesia involves two points, viz., *abolition of suffering* and the *maintaining the integrity of the uterine contraction*. The former any observer will concede. As to the second point, the writer triumphantly remarks: "Case XII, for example, is one of the best examples we can take. What does this case show us? We have a very nervous, fatigued woman; the presentation is bad, the labor of long duration; the pains succeed each other rapidly and are ineffectual. Chloral is given. Immediately the uterus ceases to contract, and, one would believe, that, at the same time that anæsthesia is induced, the medicament had arrested the uterine contractions. But the illusion is not of long duration; to the painful, powerless contractions which the patient suffers, regular energetic contractions succeed, which are produced without pain, and, in a short time, accomplish the expulsion of the child. If we analyze the twelve cases, *in extenso*, we see, with few exceptions, the same thing produced in all the cases."

"We now believe it to have been fully established, that chloral hydrate, which is capable of producing in the highest degree, cutaneous anæsthesia, can as effectually produce an annihilation of the pains of confinement; that this suppression of pain is not due to the diminu-

III. *In what cases, when, in what dose, and by what channel ought it to be administered.*

“Chloral ought especially to be given in too prolonged confinements and in primiparas, for then the pains have an intensity that will be found only exceptionally in ulterior confinements.” “It often occurs that, the pains being very intense, the patients, when they are nervous, are exhausted by their inutile efforts, and that at the moment when they especially need all of their forces for the last expulsive pains, they are fatigued and the womb ceases to contract. In these cases, chloral, which procures repose and rescues the women from exhaustion, would be expressly indicated.”

“It will be still more appropriate in nervous women, who toss about and complain beyond measure. If anæsthesia can be induced in such patients, the moment of delivery will be remarkably hastened.”

“In hysterical females, who are so often attacked at the moment of parturition, chloral can be used with success.”

After pains can be controlled with chloral.

At what time of labor ought chloral to be used? As a general proposition, the author would recommend that it be given “when dilatation is complete, and when the expulsive pains have commenced.” . . . “It is only in very rare cases and when the woman suffers much that we would be authorized in giving it during the period of dilatation.”

The dose will vary, “according to the moment of giving it, the susceptibility of the patient and the effect desired.” The dose varies from 60 to 80 grains, given in 30 or 40 grs. at an interval of 30 minutes, or, in 15-grain doses every 15 minutes, till the effect is produced.

When the stomach will not retain it, the rectum should be resorted to. The hypodermic and intravenous uses of chloral the author would not recommend.

until the margin of the urethro-vaginal septum presses against the digital commissure. The middle finger, if doubled into the hand, will impinge upon the labia, and advance will be retarded by one centimetre. The vesical apex is then pressed against the exploring finger, with the other hand. Its inverted mucous surface is thus directly explored by the finger.

Dilatation may be effected with plugs of 1.9 to 2 centimetres in diameter (6 to 6.3 in circumference) without danger of resulting incontinence in adults. The operator's finger measures at base not quite 6 centimetres in circumference (1.8 in diameter). By the side of this, in three instances, he has introduced spoons and fingers into the bladder—the stems lying in the urethra next to the finger. The circumference was thus increased to 6.5 and 6.8, and in changed positions it amounted to, at the most, 7 centimetres. In girls, 4.7 to 6.3 centimetres in circumference, are the measures inside of which the surgeon should confine himself.

The professor states that after convincing himself of the perfect safety of the performance, he did not think it wrong to make the exploration in such women as volunteered for the purpose ; and that he has practiced digital palpation in over sixty cases in Heidelberg during the last two years and a half. The profession at large will hardly assent to the propriety of such expedients in any case when entirely needless.

Vesico-vaginal section is performed by making a *transverse* incision, 3 ctm. in length, into the anterior vault of the vagina, one-fourth to one-half ctm. in front of the anterior lip of the os uteri. *By this means the bladder is introverted through the incision into the vagina, and even into the vulva itself.* Occasionally the opening was made T shaped, by a second incision carried at right angles toward the urethra. Introversion was effected by a fine double hook, inserted into the vesical mucous lining, with conjoined pressure from above. Hæmorrhage is stopped by torsion or ligature. The bladder is thus

made so completely accessible, that the most complicated and difficult operations are performed with as much facility as if on the surface of the body.

Subjoined are the indications for the operation, space forbidding the author's comments on each :

1. Diseases of the mucous membrane requiring diagnosis.
2. Stones and foreign bodies, (diagnosis and extraction).
3. Cauterization for inveterate vesical catarrh.
4. Urethral fissures.
5. In kolpo-kleisis with defect of vesico-vaginal septum.
6. Diagnosis of seat and extent of growths and tumors in that septum.
7. Extirpation of tumors (especially papillomata) from vesical membrane.
8. Discovery, extraction or excision of renal calculi, from the vesical part of the ureter.
9. Opening of hæmatometra, when puncture is impossible or too dangerous between the bladder and rectum.
10. Cure of colo-vesical or entero-vesical fistula, by cauterizing the vesical orifice of the fistula.

Subjoined are the indications for kolpo-cystotomy :—

1. Large stones with great sensibility of bladder.
2. Production of direct escape of urine, in inveterate vesical catarrh, with ulcerations of mucous lining.
3. Extirpation of tumors and excrescences, situated so high in the lateral parts of the bladder, that they cannot be made directly accessible through the dilated urethra alone.
4. Cure of colo-vesical or entero-vesical fistulæ, incurable by cauterization after urethral dilatation.

The probing and catheterization of the ureter from the bladder, after the dilatation of the urethra described above, is a procedure the credit of which Professor Simon can alone claim. At the risk of unduly prolonging this abstract, we give the *ipsissima verba* of the translation :

“After the urethra is dilated in the above-described way, we search for the ligamentum interuretericum with the finger. This ligament is about one inch from the sharply-marked internal orifice of the urethra ; in the middle it is usually so little prominent that it can only be distinguished by experienced explorers. Around the

orifice of the ureter, which is one-half to three-quarters of an inch away from the middle of this ligament, the muscular coat of the ureter, which ends in the interureteric ligament, forms a kind of a pad, and is easy to distinguish. The orifices on these pads are very thin slits, and, since they have only very narrow edges of mucous membrane, they are imperceptible to the touch. On account of this, the third act, viz., the introduction of the probe, is rendered more difficult. In order to effect it we must fix the "Harnleiterwulst" (the vesical fold where the orifice lies) with the finger in that region where the orifice must be situated, and then push the head of the probe, which lies close to the side of the finger, toward this region in the direction of the ligamentum interuretericum from the inside and below, upward and outward. The handle of the instrument must be led to the opposite side and at the same time be raised up against the arcus pubis, in order that the head of it may not glide off from the very steep trigonum. By slightly pushing we try to introduce the head of the probe into the orifice of the ureter. If the probe does not go into the orifice, it will be arrested by the walls of the bladder; but if it enters, it can easily be pushed on in an upward and outward direction. The inlying finger tells whether the probe has remained in the cavum vesicæ, or whether it has really entered into the orifice. In the latter case, we feel the probe covered by mucous membrane for a few centimetres, and we can feel the borders of the orifice all around the probe. If we wish to sound the pelvis of the kidney, we have only to push the probe on in a lateral direction until at a height of seven to eight centimetres, and we strike the brim of the true pelvis (linea innominata). Now it becomes necessary to move the handle of the probe to the inner face of the thigh of that side on which the ureter is probed, and to incline it so that the inner end of it is placed parallel to the vertebral column, and the head directed more toward the anterior abdominal coverings. In this direc-

onstrated that an expectant treatment in these cases, is followed by less mortality than operations for hysterotomy.

5. When, in consequence of an error in diagnosis, gastrotomy discloses a uterine tumor, and not an ovarian cyst, ablation is preferable to leaving the operation unfinished, even though the fibroid tumor be not pediculated.

Under the head of cervical hysterotomy, the author includes simple division of the neck ; incision followed by enucleation where the tumor is developed in the tissue of the cervix ; and lastly, complete amputation of the cervix when it encloses in its substance a largely developed fibroid tumor productive of true hypertrophic elongation.

Intrauterine hysterotomy first described by Velpeau, first practiced by Amussat, finding but little favor with the French and enthusiastically adopted by the English and Americans, is described according to the procedure of Marion Sims.

III. CUTANEOUS DISEASES.

1. *Elephantiasis Arabum*. FAYRER, JOSEPH, C. S. I., M.D., F.R.S.E. (*Practitioner*, Aug., 1875.)

The disease is defined to be a non-contagious malady, endemic in certain localities, generally intertropical and near the sea-coast, characterized by recurrence of febrile paroxysms, attended by inflammation and progressive hypertrophy of the integument and areolar tissue, chiefly of the extremities and genital organs ; and occasionally by swelling of the lymphatic glands, enlargement and dilatation of the lymphatics, in some cases by the coexistence of chyluria and the presence in the blood of certain nematode hæmatozoa ; the hypertrophy of the integument resulting in enormous enlargements of the scrotum or labia, accompanied by an albuminous deposit in the cells of the areolar tissue, and by degeneration of the muscular and osseous tissues.

long courses of arsenic have been vainly tried, is its use beneficial. He ordinarily begins with two minims, three times a day, in a teaspoonful of treacle, and, if necessary, increases the dose to half a teaspoonful, or even more. The smaller dose is advised at first, since in certain cases there is intoleration of the remedy, and in others, digestive disturbances, fever and bright red exanthem.

He also testifies to the virtues of the remedy in catarrh of the bronchial tubes (Ringer) and in chronic affections of mucous membranes, and deems it remarkable that a remedy once so highly esteemed, should, as an internal medicine, have fallen into such disrepute in our own time.

3. *Non-specific Rupia prominens.* GODON. (*Medical Record*, Sept. 4.)

A conical crust or scab on the left side of the external surface of the prepuce, was observed in a patient 23 years of age. Dark blue rings, with a lighter-colored interspace, were surmounted by a thick, hard, dark, bluish cap. The base secreted a mass of yellow pus, confined and supported by a thin film. At right angles to the base, ran darkish streaks on the film, through which pus oozed. The base was surrounded by a pinkish and inflamed margin, about a quarter of an inch or less in width, which did not implicate the healthy skin. Vertically, the crust measured three-fifths of an inch; the circumference, one inch and nine-tenths. There had been no sexual intercourse for two months and a half; one year previous there had been gonorrhœa. The patient was fair, pale, with a large head and prominent forehead, and was evidently scrofulous. There had been pre-existent rheumatism. History and signs of syphilis were all wanting. On the removal of the crust, sanious, yellowish-gray pus was found in quantity beneath.

The case is interesting in view of the fact that dermatologists are not agreed as to whether rupia is, or is not, an exclusively syphilitic lesion.

over the hips. It may also be found independently elsewhere. It is easily distinguished from ringworm by its objective features, and the results of treatment.

Dr. Thin, while in Shanghai, frequently found ordinary ringworm disappear under the use of simple remedies, while the marginate eczema required months of treatment; and then almost invariably there was relapse. He distinguishes a wide difference between the two affections, and considers that the rarity of the last named disease in England and throughout Europe, has contributed to the adoption of Köbner's view. In China, practitioners have no hesitation in making a like distinction; eczema marginatum with them resisting anti-parasitic treatment.

Dr. Henderson, of Shanghai, informed him by letter, that the profession in China were at last able to cope with the disease by the aid of a secret remedy, Goa powder, which was speedily becoming popular. Dr. Thin gives interesting details, in the case of a gentleman who got Burmese or Chinese ringworm in Singapore, and was relieved by both the Poh di Bahia and the Goa powder. A specimen of the drug obtained in London did not answer the purpose; it was supposed to have lost its efficiency from age. This patient preferred the Poh di Bahia to the other, as less irritating and more speedy in its effects.

(B) Ferrand reports that Goa powder first appeared in Europe in 1866 or 1867, and that Blanc, a surgeon of the English army in India, called attention to the value of the remedy in tinea circinata. From him M. Gubler obtained a specimen of the drug which he has analyzed.

According to Attfield, chrysophanic acid constitutes nearly 80 per cent. of the powder; the remainder being composed of two principles, one bitter, the other sweet and resinous. It is generally supposed to be the powder of a lichen exported from Mozambique. Others believe it to be the dried product of one of the leguminosæ. Gubler dissents from these opinions.

IV. SURGERY AND OTOTOLOGY.

1. *Rupture of External Iliac Artery.* JOHN ASHURST, JR., M.D. (*Phila. Med. Times*, Aug. 21, 1875.)

An engineer, 39 years of age, applied for admission to the Episcopal Hospital, on June 15, saying that one week before he had, in trying to board a railway train, slipped and fallen backward, striking a rail and receiving a severe blow in the region of the lumbar spine. Slight inconvenience from the injury was experienced at the time, but the next morning the patient felt stiff, and had a good deal of pain in the back. When admitted to the hospital he walked without difficulty and was considered to be suffering merely from a contusion or sprain of the lumbar muscles. On the following day, the patient was in much the same condition and gave no evidence of having received any serious injury. On June 17, I found the patient in a cold sweat, and then learned that a similar "sinking spell" had occurred on the preceding day, but had passed off in a short time. The patient complained of pain in the left side as well as in the back, but there was no tenderness on palpation. The left common femoral artery was observed to be pulsating with great force. On June 18, the patient was almost in a state of collapse, bathed in a profuse, cold sweat, with rapid respiration and with a pulse running at the rate of 120 or more beats in the minute; he had more pain, still referred to the back and left flank, and vomited a little after taking food. There was no tympanitis and no general abdominal tenderness, and the tongue was moist and clean. Pulsation in the common femoral artery was now rather feeble, but a marked pulsation in the epigastric region was perceptible both to sight and to touch; auscultation, moreover, revealed a bruit, not however, of a very decided character, and not propagated for any great distance along the course of the aorta. There was no bruit in the iliac region. Careful examination failed to discover a tumor in any part of the

hand placed upon any portion of the leg from the insertion of the soleus upon the tendo Achillis, to the knees, perceives most decidedly the characteristic thrill, while the fibula is forcibly thrust against the finger. There is no well defined and limited tumor, but a general enlargement of the entire leg. The pulsation is strongest over the lines of the two main arteries, and the ear along their course, plainly detects a loud bruit. There is no undue pulsation of the popliteal, nor do the thrill and bruit extend to that artery. The dilatation evidently commences just at the point where the bifurcation occurs. Both arteries are largely dilated, but taper towards the ankle, where the normal calibre is resumed. Pressure upon either the femoral or popliteal artery entirely arrests all pulsation, thrill and bruit, and also relieves the pain." All arteries are atheromatous; and the patient is suffering from albuminuria of long standing. Ligation would have been, at best, dangerous; digital compression of the femoral artery was therefore advised, and commenced upon the 17th of July; and uninterruptedly continued until the end of fifty-five hours. The thrill ceased at the end of twenty hours, and the pulsation stopped at thirty-six hours. Sixteen persons were alternately engaged in performing the compression.

3. *Treatment of Varix by Local Application of Perchloride of Iron.* DR. LINON. (*L'Indépendente*; *N. Y. Med. Journal*, Oct., 1875.)

Dr. Linon (Verviers) has for three years treated varix with great success by the local application of perchloride of iron. He used a solution of the strength of six grammes in two hundred of water (about $1\frac{1}{2}$ drachms in 6 $\frac{3}{4}$ ounces). Compresses of flannel are to be wrung out in this fluid, and applied to the parts with a moderately tight bandage. These applications should be renewed for seven or eight days consecutively, after which the bandage should be continued without further wetting with the solution. After a time, the solution is again

caused by abnormal pressure upon the peripheral expansion of the auditory nerve in the labyrinth, such as would result from the stapes being pressed in upon the labyrinthine fluid. Where the presence of this symptom cannot be attributed to this cause, as is often the case, it is customary to assume the existence of a morbidly increased irritability of the auditory nerve, an irritation of the auditory nerve, whether of its trunk or its terminal expansion in the labyrinth. Dr. Theobald now thinks, in the first place, that the tinnitus is invariably due to an excitation of the *terminal* elements (not the trunk) of the auditory nerve, and, after a careful consideration of the various physical, anatomical and pathological facts which seemed to have any bearing on the subject, he has been led to the conclusion, "that, in almost all cases, tinnitus aurium, whether associated with aural affections, cerebral diseases or constitutional disorders, is to be attributed to the existence of *vibrations excited in the walls of the blood-vessels of the labyrinth, by the friction attending the circulation of the blood,* which are capable of imparting to the labyrinthine fluid, and thence to the terminal fibres of the auditory nerve, impulses similar in character to those which are produced by the vibrations of the stapes, and hence, like them, capable of giving rise to the sensations of sound.

The vibrations of these vessels can produce a sensible impression upon the auditory nerve in two ways. First, the intensity of the vibrations may be increased. Second, the vibrations remaining unaltered, their effect upon the nerve may be magnified by reflection and concentration or by resonance. The first condition will obtain whenever the natural and easy flow of the blood is perturbed, as for instance in hyperæmia or anæmia of the labyrinthine vessels, by partial compression of the vessels by inflammatory or other causes; especially by an incursion of the stapes by which the tension of the labyrinthine fluid is increased. By the second mode—reflection or resonance—the tinnitus is produced, which accompanies the

2. *Complete Gangrene of the Left Kidney.* AVEZOU. (*Phila. Med. Times; Le Progrès Médical.*)

A man of 79, with left-sided pneumonia, died in eight days. He had had for years lumbar pain on the left side, but never other symptoms that indicated kidney disease. An autopsy revealed hepatization of the left, and congestion of the right lung, with atheroma of the aorta. The right kidney appeared normal, the left was black, friable and fetid; the tissues surrounding this kidney were dark colored, its ureter was patulous, and its artery was nowhere obliterated. The microscope revealed interstitial nephritis and the alterations due to it in both kidneys.

3. *The Modus Operandi of Yellow Fever Poison.* G. M. STERNBERG, M.D. (*New Orleans Med. and Surg. Jour.*, July, 1875.)

The theory of zymosis is objected to, as wanting in substantial proof.

The hypothesis is advanced "that the first and essential effect of the yellow fever poison is to produce a disturbance of the functions of the sympathetic nervous system, and that the grave changes in the blood which occur in the course of the disease are secondary in their nature, and result from the arrest of vital processes (nutrition, excretion, secretion) presided over by the sympathetic." While during the disease blood changes occur that may account for some of the symptoms, Dr. S. is not aware that prior to, or at the time of the invasion, any such changes have been discovered as would account for the pronounced and sudden symptoms. He believes the liability to an attack as well as its severity, is largely due to the dose of the poison taken, and not wholly to the age, sex, habits, etc.; and this position, if true, is against the zymotic theory. For proof that the poison is capable of self-multiplication outside the body, he quotes Ziemssen and Reynolds, and that it is a vegetable fungus, he thinks the supposition very strong. Various poisonous fungi are known to produce their symptoms at a variable time after being taken. The poisonous mushroom

action of the heart, thyroid enlargement and exophthalmos, one may occur—the first preferably—without the others. Dr. B. thinks many of the cases of rapid heart's action with paroxysmal palpitation are of this sort, and similar in pathology to this disease. He thinks also, many cases of so-called *goitre* "are really examples of Graves' disease—the enlarged thyroid only attracting attention." The distinction between the two is, that in *goitre* there is hypertrophy or hyperplasia, or both, of gland elements, while in Graves' disease the thyroid enlargement is largely due to dilatation of vessels and to hyperkinesis of the heart. In the latter, the enlargement is fluctuating; in the former, it is more continuous.

When the exophthalmos is only slight, the method of examination of von Graefe is commended. This consists in having the patient simply look down, when, if the condition exists at all, "a white rim" of the sclerotica appears below the upper lid and above the iris.

Three illustrative cases are reported. One was that of a woman of 32 years; there were paroxysms of palpitation; constant elevation of pulse-rate; intercostal neuralgia, often very troublesome; but only slight exophthalmos, and less enlargement of the thyroid.

Chalybeates and other tonics wholly failing, the constant galvanic current, with 20 cells, was resorted to regularly, the negative pole at the epigastrium and the positive against the neck. Perfect recovery resulted.

Another case was that of a woman of 54 years. There was *goitre* of many years standing, palpitation and increased action of the heart, large pigmentary discolorations of the skin, in spots about the neck, the sternal region and (symmetrically) on the dorsal aspect of the hands, and cachexia, but no appearance of exophthalmos.

The treatment was the same as in the first case, and recovery was nearly complete in three or four months.

The other case was that of a woman fifty years old. Here a considerable exophthalmos had appeared suddenly after a night of great anxiety. Rapid heart's action had

hæmaturia, been failing in strength and appetite, and had resorted to regular rations of alcoholic stimulants.

6. *The Influence of the Lower Organisms in the production of Infectious and Contagious Diseases.* (Med. Times, Phila.)

In a series of three articles in the *Times*, the above named subject is reviewed. After an extended reference to the studies and investigations that have been made on the subject, the reviewer quotes from Birch-Hirschfield, who, in a review of our present knowledge of the bacterial origin of disease, speaks as follows: "In a majority of diseases, the fungous origin of which has been made the subject of inquiry, we possess little or no exact proof of a parasitic cause, not even in the case of malignant pustule, or that of relapsing fever. But the *probability* that bacteria are not insignificant associates of these pathological processes, is, to an unprejudiced observer of the facts recently discovered, very strong, and the same may be said of the diseases previously mentioned." "Much which we already know regarding various circumstances connected with the life and development of bacteria, agrees singularly well with the ideas impressed upon our minds when we endeavor to form a conception of the infectious material of epidemic disease."

"It must be conceded, however, that so far as most of the forms of bacteria are concerned, investigation shows that, if they are not received in too overwhelming quantity, the *healthier* organism offers them an almost absolute resistance." "Proof also is available in the case of many diseases for the assertion that *those only are attacked by the disease who were sick already.*"

VI. THERAPEUTICS.

1. *Sea Sickness—Its Pathology and Treatment with Amyl Nitrite.* CROCHLEY CLAPHAM, L.R.C.P.L., Ph.D., etc. (Lancet.)

The writer has had the opportunity of making a post-mortem examination in a case of this malady—the only one we believe on record. The subject was a Chinaman,

“Non-syphilitic ulcers of the throat, under this treatment, at once assume a healthier aspect and heal rapidly.” “Its effects in scarlatinal sore throat are very marked, the pultaceous secretion being checked, and the inflammatory swelling diminished.” In severe cases, he recommends gargling every hour.

3. *Gelsemium Sempervirens in Facial Neuralgia.* C. H. NEWCOMB, A.M., M.D., Mechanicsburg, Ohio. (*Cin. Lancet and Observer*, September, 1875.)

This drug is vaunted very highly in the above disease, and several cases detailed. The dose used varies from five to ten drops of the fluid extract every three or four hours. The result always was relief. He thinks six drops of the fluid extract every four hours sufficient. This drug, the writer considers, has as certain an influence over the nerves of the head and face, as ergot has over the uterus. To physicians in malarial districts, he would recommend gelsemium in the facial neuralgias that resist iron, quinia, strychnia and arsenic. Its cheapness is a secondary consideration, and of considerable importance to those who have to supply their own drugs.

4. *Gelsemium in Odontalgia.* JAMES SAWYER, M.D., Land. M.R.C.P. (*Practitioner*, August, 1875.)

“I have rarely found gelsemium fail to give decided and lasting relief in cases of neuralgic pains in the face and jaws, associated with carious teeth. I have usually given fifteen minims of the tincture every six hours.”

5. *Arrest of Cardiac Palpitations.* ANON. (*Med. Times and Gazette*, August 28, 1875.)

A correspondent in the *Union Médicale*, August 21, calls attention to the fact that palpitations, when not dependent upon organic disease, may be almost immediately arrested by bending the head downwards and allowing the arms to hang pendant. The effect is even still more rapidly produced by holding the breath for a few seconds, while the body is in this bent position.

uteri were examined, and the condition of the uterine mucous membrane noted in all its various changes from the time of its first appearance in the foetus, through its period of development to maturity and its season of functional activity, down to the time of involution and inaction.

An account of these researches was published in Stricker's "*Medizinische Jahrbücher*" for 1873; but, according to our author, now a resident of St. Louis, the MS. for that publication was prepared after his departure from Vienna, by Dr. Kundrat, and contained some views which he cannot endorse; and this fact, together with some others, has induced him to issue the present work.

The book is divided into three parts, as follows: Part I. The Mucous Membrane of the Womb, in its Development up to the Time of Puberty. Part II. The Mucous Membrane of the Womb during its Period of Maturity and Functional Activity, from the Time of Puberty to the Change of Life. Part III. The Mucous Membrane after the Change of Life.

Under the first head we are informed that in its earliest phases of development, the uterine mucous membrane consists simply of round or polygonal cells imbedded in a net-work of connective tissue. No glandular structure is apparent until about the tenth year, although traces of the presence of glands, in the shape of small crypt-like depressions, are found as early as the third or fourth year. From the tenth year forward, the changes both in the increasing thickness of the membrane and the development of the glands, proceed rapidly to maturity; although, owing to the great differences of race and nationality among the inhabitants of Vienna, and the fact that many of the uteri examined were those of girls whose health had been greatly impaired by chronic and wasting diseases, the author was unable to fix definitely the time of full development.

In Part II, the author first considers the condition of the fully matured membrane during its period of rest.

glandular epithelium, accompanies this process—in proof of which I will say that numerous epithelial cells, in a state of beginning fatty degeneration, are found imbedded in the whitish, somewhat bloody, mucus which fills the uterine cavity.”

The latest writer who has touched specially upon this point, is Dr. John Williams. (On the Structure of the Mucous Membrane of the Uterus and its Periodical Changes, *Obstetrical Journal of Great Britain and Ireland*, February and March, 1875.) He states positively that in two of the uteri examined by him, the membrane of the cavity of the uterine body was wholly absent. In one case the woman, aged thirty-five years, died about the ninth day of typhoid fever. The menstrual flow had been present for four days, and had not quite ceased at the time of death.

In the second case, although no menstrual history could be obtained, the appearances were similar. Here, too, the mucous membrane, perfect in the cervix of the organ, ceased abruptly at the internal os. In both cases the muscular wall was exposed in the cavity.

These observations of Dr. Williams confirm those previously made by Tyler Smith, Handfield Jones, Pouchet and others.

In regard to the cause of the menstrual flow, the author has only an opinion to give. During and immediately after the hæmorrhage, a fatty metamorphosis involves the cells of the upper layers of the membrane, the blood vessels, and the glandular and surface epithelia. These changes he regards as the cause of the hæmorrhage. He says: “Thus it appears that after a certain degree of tumefaction has been reached by the menstrual membrane, this change in its elements, this process of disintegration is inaugurated, and rapidly developing, especially upon the surface, leads to the rupture of the distended vessels, and hæmorrhage ensues.”

Dr. Engelmann is a believer in the correctness of the ovulation theory of menstruation, and thinks the evi-

the mucous membrane of the ovum in its passage from the tube into the cavity of the womb, is wholly refuted by the examinations made of menstrual uteri. In every case examined, the openings of the Fallopian tubes, as well as the internal os uteri, were completely pervious, and in no case was there any union or even agglutination of the membrane at these places; and hence, the ovum could not possibly produce a reduplication of the mucosa in the manner formerly supposed.

The author next describes the normal development of the deciduæ, and traces their growth from the first two weeks of conception to the end of pregnancy.

He maintains that the usually accepted notion, that the villousities of the chorion penetrate the mouths and ducts of the uterine glands, is erroneous. He characterizes it as a very plausible theory, but one not founded upon any macroscopic or microscopic preparations in the hands of any of the authors who advocate its truth. He says: "My examinations and still preserved specimens, prove that no such relation exists between the ovum and the uterine membranes, that the villi do not enter the gland tubes, but that the adhesions existing are owing to an agglutination of the parts and to the growth of the serotinal tissue around the villi." He maintains also that this statement with regard to the relation between the chorion and serotina, is equally true of the more fully developed ovum, and that hence, the very foundation of the wide-spread theory of the formation of the placenta, falls to the ground.

There seems to be some difficulty in deciding whether the large blood sinuses of the placental portion of the serotina, which all authors describe as the most important feature of that structure, are normal and necessary, or whether they are artificial and accidental. It is well known that Ercolani and Braxton Hicks deny their existence; the latter, having examined eight placenta *in situ* in different stages of pregnancy, states that he found no blood, or only a mere trace, between the villi.

maintain that during parturition the mucous membrane of the uterus is entirely removed, and the muscular fibres become exposed in the uterine cavity. The former writer states that "the mucous membrane is completely thrown off after parturition, in the form of decidua and placenta uterina, and this has to be formed entirely new." Heschl says: "The placenta site, which always occupies a third part of the contracted uterus, still retains a projecting, uneven, and considerably lacerated surface. The rest of the inner surface of the body of the uterus, is composed of muscular substance, from which, here and there, hang shreds, the remains of the decidua."

The condition of the mucous membrane after the change of life is dismissed in a single paragraph of ten lines, the substance of which may be summed up in two words—rest and atrophy.

A. R. J.

Translations.

HERMAPHRODISM,

FROM A MEDICO-LEGAL POINT OF VIEW.

Translated from the French of Busile Poppesco,

By E. WARREN SAWYER, M.D.,

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(Continued from page 792.)

We have undertaken, at some length, to state these ingenious explanations, without being understood as adopting purely speculative theories.

Other authors have given another explanation of hermaphrodisism; I will limit myself to the simple mention of it; among others, I will cite the names of Is. Geoffroy Saint-Hilaire, Dutrochet and Marc. According to these authors, who assume as the foundation of the funda-

a surgeon on account of the absolute absence of menstruation ; and because of which, the tribunal of Dreux had directed her to assume male attire. Briand and Chaudé also speak of this individual who, christened and educated as a girl, one day demanded the privilege of marrying a woman whose pregnancy was due to his efforts.

The same authors still further express themselves : " Marriage cannot be otherwise contracted than between two persons of different sex ; if it is to be supposed that a marriage might have been contracted between a woman and an individual who, up to that time, had been regarded as belonging to the male sex, but who really was a woman, as she was, will any one dare to assume that such a marriage is valid ? No ; without doubt such a union ought evidently to be annulled, because of error. Let one suppose, on the contrary, an individual in whom a freak of nature had given birth to a rudimentary virile organ, is there not equally in this case an error in the person ? In both cases, the justice of the decision is the same, *ubi eadem ratio, idem jus*. It is necessary to annul such a marriage." Moreover, it was thus that the case was decided which came at first before the tribunal at Alais, in 1869 ; I desire to recall, in a few lines, the interesting particulars in this case. M. D. was married in 1866 to a person inscribed on the register of civil state under the name and surname of Justine A. Z., then twenty-five years of age. In 1869, only, he decided to demand the nullification of his marriage, for which he alleged the following motives : according to his own observations and those of a midwife, this pretended married woman did not possess a single organ which characterizes the female sex ; she had neither breasts, ovaries, uterus nor vagina ; her pelvis was conformed to that of the male rather than to that of the female ; moreover, though she was twenty-seven years of age, she had never had either menses or periodical lumbar and abdominal pains. After a first decision had been reversed by the Imperial Court of Nîmes, which among other considerations gave the fol-

lowing: "While the law has not included impotence with the causes for nullifying a marriage, it follows that every demand, tending to prove that one of the espoused is found in that state, should be rejected," the cause was then submitted to the supreme court. It was then that M. Tardieu was appealed to for his opinion.

"The intervention of the physician, indispensable in such cases, is perfectly defined in its object, and should be, at the same time, perfectly distinct in its results. The question to decide is expressed in these very simple terms: the person espoused as a woman, is she a malformed woman, impotent and unfit for sexual union? In this case, there is not a cause for divorce, in the restricted sense the law has fixed. Is he a malformed man offering the deceitful appearances of the female sex? In this case, the marriage has not even existed, and is radically wrong. A medico-legal expert is, without doubt, necessary and indispensable, for the solution of the double question that I have just indicated."

Relying upon a very incomplete certificate, given by Dr. C—, M. Tardieu, taking as a foundation for his scientific argument, the general conformation, the narrowness of the pelvis, the negative development of the breasts, the absence of the vagina, but especially the absolute failure, not only of the original menstrual flow, but even, at that time, of the periodical flux, accompanied by lumbar or abdominal pains, with swelling of the breasts, arrived at the conclusion, that this person, not possessing in reality a single organ essential to the constitution of the female sex, was a man, but a malformed man, presenting the most common type of hermaphroditism.

In adding to his report, M. Tardieu recalled the fact that, from a medico-legal point of view, sexual indifference, or absolute neutrality does not exist; and Briand and Chaudé themselves, after having admitted theoretically this variety of hermaphroditism, say that, from a medico-legal point of view, "these individuals should be regarded as being of the masculine sex; because,

in them the female genital parts cannot be discovered ; and the absence of virility depends only then upon the want, or the atrophy of the testicles."

The case was only decided in 1873, and the court annulled the marriage inscribed on the registers of the civil state of the commonwealth of Alais.

One can resume all which has preceded, in saying that, if the impotence or the infecundity of the espoused cannot be admitted as a cause for nullification of marriage, it is not the same for identity of sex, which requires most often a declaration of fault in the person, and consequently establishes the nullity of the marriage. This case is certainly the most difficult which can be submitted to the examination of the medical expert.

ERRORS IN THE INSCRIPTION OF THE SEX IN THE CIVIL STATE.

In addition to the foregoing facts, there remains to be considered the *errors in the inscription of the sex in the civil state*. These facts have a capital importance ; because, if an error is committed, there will result a series of disastrous consequences which I have just indicated in the preceding pages.

It will be remembered that the greater part of the vices of conformation are the result of an arrest in development, the subject of which, in the immense majority of cases, is an individual belonging to the male sex ; and that the malformations of the sexual organs of the female, are much more easy to recognize, especially on account of the multiple and varied manifestations the ovaries are subject to, by the aid of which their presence is made known.

When the physician is appealed to, to pronounce upon the sex of the person, often for the purpose of reinstating an individual in his true civil rank, who has had attributed to him a sex that was not his own, he should follow from point to point the line of conduct which has already been clearly indicated by Marc : 1, to observe at

of the parents, or the persons who witnessed the accouchment, but to ascertain for one's self the sex of the infant."

Sometimes there are circumstances under which it will be very difficult to pronounce immediately; "in these cases," said M. Legrand du Saulle, "cannot one postpone the decision, as in a consultation of the guard of the seals, in 1811; and will not this postponement be preferable to a hasty affirmation, founded upon hypotheses, and analogies, and which can entail many disastrous consequences?"

One other medico-legal question should engage our attention, the solution of which, we are forced to admit, is not easy; we allude to the capability of the hermaphrodites for procreation and their fitness for marriage. Take, for example, the case of Alexina B——, in whom the penis was of small size; after the rectification of her civil rank had been obtained, could Alexina then marry? Was there really impotence? Yes; according to M. Legrand du Saulle; "because, though the act of copulation could be well accomplished, fecundation is really impossible. It remains evident that Alexina B—— is an unclassified being, incapable of reproduction, and consecrated to an eternal celibacy." It seems to me, however, that Alexina B—— presents all the attributes of the male sex, and that some day, when there will be adopted in France the singular practice of certain American surgeons, it will be no longer admissible to say that fecundation by such a subject is in reality impossible.

For the medical jurist, we will admit only two classes of hermaphrodites: in the first, much the more numerous, will be the hermaphrodites whose sex is recognizable; the most frequently they will be individuals of the male sex, who will be able to marry (the impotence not being absolute), or of the female sex who cannot marry, their sexuality not being sufficiently distinct.

In the second class, will be those individuals whose sex cannot be defined. These are the persons whom Is.

COLLEGE OPENINGS.—The lectures in the Chicago Medical College for the Session of 1875-6 were inaugurated on the evening of October 4, by Prof. H. A. Johnson. The subject of the address delivered on this occasion was, the relations of the physical and spiritual universe to man and the duties of the educated physician resulting therefrom. The lecture was delivered with great animation and was heard with marked attention by a large number of students, professional gentlemen and ladies, who had assembled in consequence of the interest arising from the inaugural lecture of the course.

On the conclusion of the address the audience dispersed through the museum, laboratory and halls of the college, which were opened and lighted for their accommodation.

The Departments of Surgery; of Diseases of the Skin and of the Eye, Ear and Chest, connected with the South Side Dispensary, have been recently removed to commodious rooms in the basement of the College Building, which have been fitted up for that purpose, and furnished with apparatus for heating, lighting and providing hot and cold water for the attending physicians and surgeons.

The opening exercises of the winter session of Rush College were held in the (temporary) college building, corner 18th and Arnold streets, on the evening of Sept. 29th. About two hundred students were assembled. An introductory prayer was offered by Rev. John Williamson, after which a brief address was delivered by Prof. Edwin Powell.

The facilities afforded by the Dispensary accommodations in the building of the Chicago Medical College, referred to above, enable the Faculty of that institution to give henceforth regular clinical lectures in their own amphitheatre. As heretofore, there will be also daily clinics in the gynecological rooms of the College.

The regular session of the Woman's Hospital College was begun on the morning of October 5th, with the regular didactic lectures.

Would it not be sensible for all colleges to follow the example of this, and omit any ceremony of opening the regular course of lectures?

17; enterocolitis, 7; epilepsy, 1; erysipelas, 8; exhaustion, 2; fever, congestive, 1; fever, intermittent, 1; fever, remittent, 6; fever, scarlet, 20; fever, typhoid, 46; gastritis, 8; gastro-enteritis, 5; hæmorrhagica purpura, 1; heart, disease of, 10; heart, organic disease of, 2; heart, rheumatism of, 2; heart, valvular disease of, 4; hepatitis, 1; hernia, incarcerated, 1; hydrocephalus, 10; inanition, 28; illeocolitis, 1; intemperance, 2; indigestion, 2; icterus, 3; jaundice, 2; kidneys, disease of, 1; kidneys, Bright's disease of, 5; laryngitis, 1; liver, atrophy of, 1; liver, congestion of, 1; liver, inflammation of, 1; lungs, congestion of, 3; lungs, scrofula of, 1; manslaughter, 1; metro-peritonitis, 1; meningitis, 11; meningitis, cerebrospinal, 7; meningitis, tubercular, 4; metritis, 1; old age, 10; paralysis, 4; peritonitis, 5; pneumonia, 13; pleurisy, 1; phlegmonia, 1; pyæmia, 1; rheumatism, 2; scrofula, 2; septicæmia, 3; septicæmia, puerperal, 1; stomatitis, 1; suicide by drowning, 1; suicide by poison, 1; suicide by hanging, 1; suicide by laudanum, 1; syphilis congenital, 2; tabes mesenterica, 16; teething, 15; trismus, 2; ulceration of mouth and throat, 1; whooping cough, 19. Total, 764.

Premature births, 12; still births, 57. Total, 69.

COMPARISON.—Deaths in month of September, 1875, 764; in August, 1875, 986. Decrease, 222. Deaths in September, 1874, 809. Decrease, 45.

AGES.—Under one year, 304; one year to two, 148; two years to three, 80; three years to four, 8; four years to five, 8; five years to ten, 28; ten years to twenty, 35; twenty years to thirty, 56; thirty years to forty, 31; forty years to fifty, 30; fifty years to sixty, 29; sixty years to seventy, 23; seventy years to eighty, 18; eighty years to ninety, 6. Total, 764.

Males, 408; females, 356. Total, 764.

White, 756; colored, 8. Total, 764.

Married, 139; single, 625. Total, 764.

NATIVITIES.—Atlantic Ocean, 1; Austria, 1; Bohemia, 4; Canada, 7; Native—Chicago, 124; Foreign—Chicago, 381; United States, other parts, 99; Denmark, 1; England, 10; France, 2; Germany, 59; Holland, 1; Ireland, 46; Norway, 3; Russia, 1; Scotland, 4; Sweden, 12; Switzerland, 2; Shetland Isles, 1; Wales, 1; unknown, 4. Total, 764.

Deaths daily, 25½. Mean thermometer, 61°. Rainfall, 4.39 inches.

MORTALITY BY WARDS.—Ward 1, deaths, 1; population in 1874, 5,725; percentage, 5,725. Ward 2, deaths, 3; population, 4,880; percentage, 1,610. Ward 3, deaths, 17; population, 14,861; percentage, 874. Ward 4, deaths, 14; population, 15,361; percentage, 1,097. Ward 5, deaths, 36; population, 20,078; percentage, 561. Ward 6, deaths, 75; population, 35,916; percentage, 479. Ward 7, deaths, 67; population, 31,722; percentage, 474. Ward 8, deaths, 46; pop. 29,143; percentage, 633. Ward 9, deaths, 43; population, 31,654; percentage, 720. Ward 10, deaths, 23; population, 17,385; percentage, 756. Ward 11, deaths, 23; population, 14,022; percentage, 609. Ward 12, deaths, 11; population, 16,792; percentage, 1,527. Ward 13, deaths, 27; population, 17,892; percentage, 663. Ward 14, deaths, 29; population, 16,720; percentage, 576. Ward 15, deaths, 132; population, 45,545; percentage, 345. Ward 16, deaths, 45; population, 21,922; percentage, 487. Ward 17, deaths, 42; population, 20,777; percentage, 495. Ward 18, deaths, 35; population, 21,392; percentage, 611. Ward 19, deaths, 8; population, 4,677; percentage, 585. Ward 20, deaths, 12; population in 1875, 8,995; percentage, 749.

Accidents, 18; County Hospital, 13; Foundlings' Home, 20; Home Good Shepherd, 2; Hospital Alexian Bros., 5; Home for Friendless, 1; Mercy Hospital, 4; manslaughter, 1; Protestant Orphan Asylum, 1; St. Luke's Hospital, 3; St. Joseph's Hospital, 3; suicide 4. Total, 764.

results that we witness with each recurring summer. Acting upon these opinions, I have insisted with all mothers and nurses that I could influence, that children should sleep on the hottest nights in some thick flannel or cotton-flannel night-dress, with legs and arms so made that they cannot be thrown off, and during the hot days wear a suit of flannel in addition to the usual amount of muslin clothing commonly deemed sufficient. There is often considerable objection on account of supposed discomfort to the child, but I ask who can point out any considerable harm that the human family has suffered from over clothing at any time. I think we shall be compelled to conclude ultimately that the weakness and degeneracy of our American race is more owing to insufficient clothing than to any other one cause. But in children, so far as I have been able to learn upon careful inquiry during the five years last past, there has not occurred a single case of cholera infantum or seriously obstinate and troublesome diarrhœa or dysentery, in families that have followed my course in regard to the clothing of infants and children. I cannot regard it as an accidental occurrence, for cases, and fatal cases, of all these diseases have been numerous in our city each summer.

Whether the keeping of the skin at all times covered does most, by preventing "taking cold" or by preventing the absorption by the skin of poisonous matters, in warding off the summer diseases of children, may be a question. But on this one point I am fully convinced that keeping the bodies and limbs of infants thickly covered in the hottest weather, is an efficient means of preventing a large amount of sickness which they suffer under the prevalent management. If the clothing be of a porous kind, as flannel, evaporation through it will afford all the needful cooling for health; indeed I cannot help repeating the thought that we have very slight evidence of any considerable loss of health by over clothing in any age of human life. Dr. Davis' recom-

was kept as cool as possible for several days by the application of cloths, wrung out from cold water, applied as occasion required. Perfect exemption from pain was secured by the exhibition of opiates, subcutaneously at first, later by the mouth. This treatment was continued four days without other change than an enema for moving the bowels.

During this period no untoward symptoms were present, no fever, no pain, and scarcely any discomfort other than tenderness over the abdomen on motion and on pressure. The wound was then examined and found to be healed throughout its whole extent by first intention. The sutures were removed, the strips and bandage re-applied, and no further professional attention was required on account of the wound.

The sixth day the patient, contrary to my urgent and emphatic counsel, walked about his apartments. This imprudence was followed by no serious results, and recovery was soon complete.

These cases are not without practical value to the profession in sustaining the position now being assumed in regard to the treatment of inflammation of whatever kind and wherever occurring.

The old system of treatment by alteratives, is a thing of the past. *Requiescat in pace.*

The treatment of acute inflammation by opiates has its foundation in reason and philosophy. The tell-tale nerves in irritated or inflamed parts carry information of their condition quickly to the brain and the response is quickly returned. Currents of blood are hastened to the scene of disturbance, yet more seriously disquieting the nerves of the parts implicated, and if this process remains unchecked, a seated inflammation is the natural result. If, however, instead of permitting the indications of lesion to be carried to the brain, we quiet the sensibilities of the offended nerves by such agents as may be suitable, the process of inflammation will be checked or arrested. This fact in practical medicine is well known to the intel-

Editorial.

This issue of the combined JOURNAL and EXAMINER closes the volumes of both these journals for the year 1875. Beginning the year as competitors for professional favor and patronage, and honorable rivals in the promotion of scientific progress and harmony among medical men, it is quite seemly and suggestive that these two medical periodicals should finish their annual contribution to our store of knowledge united, not only in purpose, but in fact.

Standing as we now do, at the end of the year, in the places of our predecessors, it becomes our duty—in which we take great pleasure—to thank for them the many contributors and subscribers who sustained the two journals before we became connected with them ; and, for ourselves, we would cordially express our very grateful obligations for their material assistance during the last three months.

We are stimulated by the memory of the past kindness of our good friends to renewed efforts and more industrious exertions to make ourselves worthy of their good will and kind acts in the future.

The January number will, as usual, be issued promptly, and in a new dress and style.

It will be enlarged by the addition of another form of sixteen pages to the present size, summing up, in all, ninety-six pages ; making at the end of the year a volume of eleven hundred and fifty-two pages. Its capacity will be still further increased by reducing the type of thirty-two pages to brevier.

These two changes will be equivalent to the addition of about twenty pages such as we now have.

While the publishers have thus liberally ventured upon the internal improvement of the JOURNAL AND EXAMINER, they intend to spare no pains or expense in the mechani-

alimentary, vascular and nervous systems: that is, a pure specialty cannot exist, a more monstrous thing cannot be conceived."—*Robert Barnes.*

Correspondence.

SAN FRANCISCO, Oct. 14, 1875.

EDITOR CHICAGO MEDICAL JOURNAL AND EXAMINER—

DEAR SIR:—Twenty-two seamen, affected with scurvy, in a more or less severe form, were recently admitted from the British Ship *Bremen* into the U. S. Marine Hospital at this port. That such a preventable disease as scurvy should still occur, notwithstanding the Act of 1872, which requires vessels, crossing the ocean, to be provided with lime-juice and other anti-scorbutics, clearly points to the necessity of further legislation on this subject, as suggested by Dr. John M. Woodworth, the Supervising Surgeon-General of the U. S. Marine Hospital Service, in his last annual report. In view of these facts, the general history of these cases may be of some interest. The *Bremen*, formerly engaged as a steamer between Bremen and New York, but at present transformed into a clipper ship, is 328 feet long, 40 feet beam, 26 feet deep, and registers 2,794 tons. She is in command of Captain Lawrence S. Leslie, and is owned by Edward Bates, M. P. Mr. Plimsoll, in his recent extraordinary address before the House of Commons, referred to Bates when he spoke of the ship-owners outside of the House and their "confederates within," and gave notice of a question to be put to Mr. Bates to explain the loss of six of his vessels in 1874, and then very touchingly added: "I am determined to unmask the villains who send their sailors to death." The following statements are essentially those given by the captain before a Naval Court of Inquiry, which investigated the case after the arrival of the ship in port.

three times the ordinary quantity of lime-juice to be given to the crew, as he had an abundant supply on board, but many of the men refused to take it. On his official log-book the captain has an entry that some penalty should be attached to seamen who refuse to take lime-juice and eat good pressed vegetables.

Thirteen of the crew died during the voyage. The last death occurred two days before the ship arrived in San Francisco, which port was finally reached after a tedious voyage of 191 days. It ought to be added in this connection that on one occasion when Mr. Plimsoll called attention to the ships of Mr. Bates, and spoke of the carelessness with which the wants of the seamen were looked after, he made particular mention of the *Bremen*, and stigmatized her as a "floating coffin." His statement has been verified to the letter.

The story as told by the seamen, some of whom are more than usually intelligent, differs in some respects from that given above. According to their uniform statement, the meat was very bad, hardly fit to eat; the supply of vegetables insufficient and poor, and the usual ration of bread reduced to one-half, after they passed Cape Horn.

The Court of Inquiry investigated the case very thoroughly, and reported adversely to the captain, censuring him for not having called in at a way port, to procure a supply of fresh vegetables. This is another proof that "the invariable and indispensable antecedent of scurvy has been a deficiency or absolute want of fresh vegetable food."

On admittance to the hospital, the men presented the usual symptoms of scurvy; general depression of the physical powers; pain in the limbs, with hardening of the muscles, especially the hamstring muscles, from fibrinous deposit; swelling, sponginess and bleeding of the gums, with a blue line along the edge; offensive breath, etc.

The treatment consisted in supplying the patients with

abdomen was then about as large as at the seventh month of pregnancy. The patient was pale and anxious, but otherwise in good condition—the os being soft and patulous, and occupied by the cysts. The treatment consisted in the removal of the hydatidiform mass, and the subsequent use of ergot and injections of subsulphate of iron. The patient recovered.

It is the opinion of modern authors that the pathological changes in this disease occur in the chorion villi, and this of course involves the assumption that it is always the product of conception; but opinions are divided as to the precise manner in which these changes are brought to pass. The cysts are *not* true hydatids, and the latter are rarely found in the uterus. Paget holds that the primary departure from health occurs in the chorion, and is manifested in cystic enlargement of the cells of the villi. From the cells on the outer surface of each primary cyst new villi sprout, which, in turn, are converted into other cysts, and thus the process continues indefinitely. According to Virchow, each placental villus consists of an epithelial covering, and a matricular tissue, which is continuous with the proper mucous tissue of the umbilical cord.

In hydatidiform degeneration, there is proliferation of the investing epithelial cells and mucous degeneration of their contents; and the intercellular substance presents the characteristics of a myxomatous growth.

FRACTURES IN OPERATIVE MIDWIFERY.

In 1870, a primipara, in the County Hospital, was seized with violent antepartum convulsions during a tedious labor, with pelvic presentation. I hooked two fingers into the flexure of the thigh; made the necessary tractive force for delivery, and fractured the left femur. The limb was dressed at once, and for a few days the baby seemed well, but the nurse, without authority, removed the dressings in order to cleanse them, and the baby was immediately attacked with convulsions, of which it soon died.

for this, the patient slowly regained a tolerable degree of comfort. She noticed upon recovery that the foetus seemed to be lying loosely in the abdominal cavity; and she could distinctly feel its outlines, and even distinguish its hand from its foot. Up to the eighth month movements of the child continued strong. Her appetite was poor, bowels very loose, cough was troublesome and attended with profuse muco-purulent expectoration. An examination confirmed all that the patient had said about the apparent position, and freedom of the child from attachment. When she turned from one side to the other, the child would fall to the dependent part, and if she assumed the knee-elbow position the pelvis of the child could be felt in the epigastric region. The uterus was five and a half inches deep, and empty. Operative interference was put entirely out of the question, by the nature and advanced stage of the pulmonary disease. The patient died of exhaustion two weeks after admission.

Both lungs were found to be partially destroyed, and there was tubercular ulceration of the bowels. Old peritoneal adhesions indicated the pre-existence of inflammation. The product of conception lay in the left side of the false pelvis and abdomen, and was enclosed in what Dr. Jones ascertained to be the enormously dilated and thickened fallopian tube. The foetus was not freed from its unnatural connections, and there was no discoverable rupture of the investing tissue. The contents of the sac were a dry, shriveled, but fully developed six-pound foetus, and a moderate sized placenta, well advanced in fatty degeneration. There was no liquor amnii, and nothing in the peritoneal cavity to indicate that rupture of the tubular investment had taken place. The left ovary could not be found, and the fringed extremity of the tube was lost upon the expansion. The uterus was large, and its mucous membrane thickened. The suspicion may be entertained that when the patient had the so-called attack of *enteritis*, there was really rupture of the sac and escape of its fluid contents into the peritoneal cavity,

did not see the patient after this time, but was informed that she died in a day or two of puerperal fever.

In a case such as that just described, and in flooding from other causes, the local use of astringents is worse than useless, although it is approved by many writers.

Dr. E. Fletcher Ingals reported the following case :

CONGENITAL ABSENCE OF ONE KIDNEY.

Though it is by no means novel at post-mortem examinations to find but one kidney, yet these cases are perhaps of sufficient rarity to render the notes which I have kept of one, of interest to this Society. The subject in which this abnormal condition was found was a coroner's case that was brought to the city morgue, in July, 1872. The post-mortem was made by Dr. Miller, in presence of Drs. Strong, Chenoweth and myself. Parties who had known the deceased, stated that he had a habit of almost constant intoxication ; and it was ascertained that he had frequently applied at the dispensary for treatment on account of dropsy. The abdominal and thoracic organs were loaded with fat ; aside from this, the heart, lungs and spleen appeared normal. The liver was but slightly altered in size, of a yellowish tinge and somewhat softened. The left kidney, to the eye, seemed of normal size ; it was paler than natural and presented a roughened surface. Bisecting the kidney we observed two cysts, one about the size of a filbert and the other the size of a large pea. The renal tissue was pale and hard ; the cortical substance thick, and the pyramids mostly obliterated. Not a trace of the right kidney could be found. The left ureter was somewhat enlarged. The lower end of the right ureter was found entering the bladder at the usual situation, from which point it rapidly decreased in size as it ascended toward the region of the kidney, and apparently came to an end about four inches from the bladder. This ureter was perforated by a canal about half a line in diameter.

In this case, the kidney was doubtless congenitally

Dr. Paoli said that the etiology of this severe difficulty was very obscure, and he had been able in but a single case to find a sufficient cause for the generally fatal result. At the autopsy of the case referred to, he found complete obliteration of the ductus communis chole-
dochus. These hæmorrhages take place during and after a number of diseases, also where the nutrition is insufficient. In Norway where the people live principally on fish, many cases had been noticed.

Dr. Van Buren related the history of a case in which there was a great tendency to hæmorrhage at the umbilicus. It was evidently from a hæmorrhagic diathesis. A second case occurring in his practice, had a protrusion over the posterior fontanelle, which he supposed to be sanguineous. The child died very suddenly a few days after it was noticed.

Dr. Earle had never seen a case, but called attention to a class of cases not necessarily associated with purpura hæmorrhagica. It was probable, according to Dr. J. Lewis Smith, that too speedy ligature of the cord may have something to do with the production of this kind of hæmorrhage.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

Regular Meeting, Oct. 25, 1875.

[Reported by E. WARREN SAWYER, M.D.]

President, Dr. Bevan, in the chair.

Dr. Merriman, the chairman of the Section on Obstetrics and Diseases of Women and Children, read a paper on puerperal fever; which was a review and examination of the recent discussion "On the relation of puerperal fever to the infective diseases and pyæmia," by the Obstetrical Society of London. After relating how the subject of discussion had been divided into six chief questions, by Spencer Wells, Dr. Merriman reviewed succinctly, and in order, the remarks of each discussor.

atmosphere, favorable to the extension of an epidemic. This condition is constant in hospitals, to that degree that the word hospitalism has been given to it. He did not believe that the so-called puerperal fever is contagious; and, on the whole, acceded to the conclusions drawn by Dr. Merriman.

Dr. Simon said that, during a recent endemic of scarlet fever, he had, in the midst of the disease, delivered a woman who was not, in the least, made worse by her surroundings.

The President remarked that some years ago he attended a woman through labor, who, at that time, had the bronchitis and premonitory fever of measles, but the woman had no puerperal trouble; though the child took measles. Frequently, while in attendance at the County Hospital through epidemics of puerperal fever, he had attended confinement cases in private practice, and once his own wife, without harm to his patients. He always observed the precaution of washing his hands in disinfectants.

Dr. C. Gilman Smith said that he once delivered a woman who had facial erysipelas, but the woman had no puerperal complication.

Dr. Bartlett was once called to a woman who was miscarrying at the sixth month, and who then had the eruption of measles at its height; twice he was obliged to empty the uterus for internal post-partum flowing; notwithstanding all this, the convalescence of the patient was not interrupted. Years ago he made frequent dissections and autopsies, and his personal uncleanness "stank to heaven" and was notorious, but he was not deterred from attending upon confinement cases without harm.

Dr. Sawyer read a paper on the second stage of labor, and exhibited the new obstetric forceps of Newman; also his modifications of the same.

In the discussion of the paper, Dr. Bartlett said, that drawing the foetal head through the cervix uteri would sometimes tear the organ, for he had witnessed the acci-

and the body, corresponding to the internal os uteri, is not so great as above that point, but it is considerable. The flexion forces out the blood by a compressing force, which also squeezes the delicate nervous filaments, which everywhere pervade the uterine tissue. It is the compression of the latter, according to the distinguished lecturer, which constitutes the uterine irritation, and produces the convulsions similar to those occurring in the case cited. (Case of acute anteflexion, probably of one year's duration, with frequent convulsive attacks during that period.) Nocturnal exacerbations were explained by the changes induced by the recumbent position. Congestion due to the flexion may account for some symptoms.

Marked uterine flexion exists in all cases of severe repeated hysterical attacks.

Niemeyer is quoted as follows: "flexions, more than any other of the disorders of the uterus, give rise to hysteria." That convulsions do not always result from flexions, is not an argument that they may not thus be induced. The *à priori* argument in favor of this theory is cogent, and the clinical reasons for its support, overwhelming. Special attention is called to the fact, that the painful part of the uterus as discovered by the sound, is always at the seat of the flexion.

3. *Convulsions due to Uterine Polypus.* SPALDING. (*Medical News and Library*, September, 1875.)

A mother of four children had convulsions for two years, the attacks being more frequent at the menstrual period, though rarely absent for a week. One year before their occurrence, there had been uterine hæmorrhage. A polypus, as large as a hen's egg, was removed from its attachment to the anterior wall of the uterus and the external os, by the aid of a wire *écraseur*. All convulsive symptoms were at once and permanently relieved.

4. *Reduction of a Retroverted Uterus after Six Abortions.* BECK. (*Phil. Med. Times*, October 2, 1875.)

A woman who had aborted five times between the second and fourth month, had retroversion, with pelvic adhesion. The sixth pregnancy was concluded at term, only by careful and skillful treatment, the uterine enlargement occurring principally, if not wholly, from the anterior wall and fundus.

She then aborted at the fourth week from innocent administration of emmenagogues. Ballooning, pessaries, and various modes of reposition were resorted to by Drs. Gregg and Orvis, to relieve the retroversion which was then discovered. Beck, when consulted, found areolar hyperplasia of a large, dense, heavy uterus, situated exactly across the pelvis, the os above the pubic arch, and impinging sharply upon the bladder, the fundus wedged tightly under the promontory of the sacrum, indenting and forcibly pressing upon the rectum. The rectal and urinary symptoms were correspondingly severe. Sims' method of reposition failed, and the protiodide of mercury with ergot, while checking the moderate hæmorrhage, failed to reduce the size of the organ.

Dr. Dills then introduced his hand into the rectum, forcibly broke up the adhesions, and pushed the fundus off from and above the sacral promontory, while Beck made forcible traction upon the os with the tenaculum, and applied heavy pressure from without through the abdominal wall. Under this tremendous force, the fundus returned to its normal position, with a perceptible jump, while the os and cervix properly descended. There was no anæsthesia, and but little pain. The patient walked to her carriage in a few moments; and has required no uterine treatment since.

5. *Extirpation of Uterus by Abdominal Section.* CHADWICK. (*Bost. Med. and Surg. Jour.*, November 4, 1875.)

A patient, fifty years of age, had had one child, and one miscarriage, in early life. There had been more or

6. *Secondary Perineal Traumatism.* MONETTE. (*Am. Practitioner*, October, 1875.)

The perineum of a woman in labor was sustained during expulsion of head, but gave way on emergence of the latter. Rupture was complete to rectum, but did not involve sphincter. The accoucheur then first learned that his patient had suffered a similar accident at her first and prior delivery; the parts having then united by granulation, without the aid of sutures. A similar result occurred in ten days after this delivery, the two cicatrices forming a dense vaginal union.

The reporter infers that union by granulation is possible in all cases, when there is not protracted lochial discharge.

7. *On the Use of Heat in Métrorrhagia.* M. NOËL GUENEAU DE MUSSY. (*Annales de Gynécologie*, July, 1875.)

In many cases of métrorrhagia resisting the action of all classical means, the writer has used, according to the recommendation of Dr. Chapman, applications of water over the sacral region, as hot as the patient could bear them. The water ought to be renewed every two or three hours. In all cases, the hæmorrhage, even the most obstinate, ceased. Dr. Chapman used water at a temperature of 46° C. The writer used the water at a temperature even more elevated.

8. *Early Menstruation.* (*British Med. Jour.*, Sept., 1875.)

A girl aged two years is reported to have menstruated for some time previous to examination. She was perfectly healthy, and the discharge was normal in color, occurring monthly with pain and discomfort.

Another girl, aged eight years, had been subject to fits for two years before examination, the attacks occurring monthly, with intense pubic and sacral pain. The pubis was covered with hair, and a perfect penis, without urethra, was found, over two inches long, capable of erection. Beneath this was a rather large urethra, and a

by the écraseur. Sutures, tents and drainage tubes are discarded ; peritoneal adhesions broken up by the finger. Hæmorrhage is arrested by torsion.

Ten operations have been performed, with two fatal results—one from peritonitis, and another suddenly from a small peritoneal abscess having no outlet. These have been for relief of convulsions, recurring hæmatocele, and recurring pelvic abscess, incipient tuberculosis, ovarian neuralgia and insanity, and intractable dysmenorrhœa with pelvic deposits of “old lymph.”

Of the eight cases resulting favorably, five had no untoward symptoms, one suffered from somewhat grave septicæmia which subsided under the peritoneal douche, and two had pelvic peritonitis with abscess and purulent discharge finding vaginal exit.

Sexual desire seems to have been unimpaired after these operations, and, with the exception of the artificially induced menopause and barrenness, no unfavorable sequelæ have been noted.

11. *Drainage of Douglas's Cul-de-sac in Ovariectomy.* SCHROEDER. (*Med. Record*, Sept. 25.)

The author gives the opinions of Peaslee, Sims, Nussbaum and Spiegelberg, who would remove peritoneal accumulations after the operation, by puncture and drainage of Douglas's cul-de-sac, but he cannot concede that the reddish serous exudation is of great etiological importance ; since daily experience teaches that such transudations and exudations into the abdominal cavity do not tend to produce septicæmia and decomposition. Several instances are cited which illustrate this point. Now how does it happen that in one case an exudation, undoubtedly present, occasions no disturbances whatever, does not even perhaps furnish slight symptoms of peritonitis, while, at another time, with a very slight operation, involving scarcely any injury of the peritoneum, there are associated the most violent symptoms of septic peritonitis ? It depends upon whether infection

the later period, strychnia, bromide of sodium or potassium, are indicated, to remove the long continued congestion.

3. *Treatment of Amblyopia Potatorum.* CHAS. S. BULL. (*Am. Jour. & Sci.*, July.)

The treatment of weak sight (amblyopia) occurring in persons addicted to strong drink, is by no means always successful, although the habit of drinking be given up. Many cases certainly recover if the patients observe total abstinence and receive some tonic medicine. Others, however, do not get well under these conditions, but improve when strychnia is administered hypodermically. But other cases, again, do not improve under the strychnia treatment. In these cases there are generally some of the symptoms of chronic alcoholism, such as insomnia, or constipation, dyspepsia and muscular tremor; and here Bull (Galezowski, Quaglino, and others,) had some excellent results from the internal administration of the bromide of potassium. He usually commenced with ten grains three times daily, and increased each dose by five grains till the patient began to show some of the toxic effects (sense of weight in the head, desire to sleep, weakness of memory). When this point is reached, it is better to omit the drug entirely for a few days, and then recommencing with a smaller dose than the highest one reached, gradually diminish the daily amount until the remedy can be discontinued entirely.

4. *Skin-Grafting.* HICKLE. (*Wiener Med. Wochenschr.*, 1875, No. 41. *Centr. Bl. f. Chir.*, 1875, No. 41.)

In the Rudolph Hospital (Vienna) the grafting was tried 1296 times on 62 patients during four years, and 85 per cent. were successful. The experiment was tried on ulcers only that showed healthy granulations. The size of the grafts varied from that of a mustard seed to that of a bean; the smaller ones took best. For the first dressing a piece of tin foil was placed between the grafts and the plaster-strips; the limb

shape by placing the diagonal corners together, and then folding these corners over and placing them on the middle of the base line of the triangle, and again folding the sheet until the "cravat" is about four or five inches wide. The end of the bandage which is next to the body of the patient is carried by a half-spiral turn up along the front of the arm, in front of and over the injured shoulder, and then down across the back to the axilla of the sound side, carried forward under the sound arm, then upward in front of the sound shoulder, and over it to the back. The other end of the cravat is now carried around over the front of the elbow-joint and between the arm of the body to the back of the patient, then upward across the back to the top of the sound shoulder, there meeting the other end of the cravat. The ends were then drawn in opposite directions so as to make the bandage as tight as could be conveniently borne by the patient, and were fastened by sewing the lapped ends to each other. The hand of the injured side was supported by a sling fastened around the neck." On the twenty-first day of the treatment (which consisted in occasionally tightening the dressing) all dressings were removed and the treatment discontinued; there was not the least deformity, nor did the bone once move from its place after the first application of this dressing.

10. *Analogies of Dislocation of the Shoulder and Hip Joints.* KOCHER.
(*Klinische Vortraege*; *Lond. Med. Record and Monthly Abst.*, Nov., 1875.)

Dr. Kocher bases the methods of reducing dislocations of the shoulder and hip on the anatomical structure of the joints. According to him, these joints possess several points of analogy, especially in their ligamentous apparatus. The Y-ligament of the hip-joint which proceeds from the anterior inferior spine to the linea intertrochanterica, and is connected with the zona orbicularis, has its analogue in the coraco-humeral ligament which, arising from the coracoid process, divides into two branches, one of which is inserted into the greater tuberosity, the

were thus successfully treated. In one case, the internal saphenous vein was implicated, with severe phlegmon and other serious complications. Success was hardly hoped for, but the termination was quite as happy as in the other instances.

III. PRACTICAL MEDICINE AND PATHOLOGY.

1. *The Treatment of Different Forms of Headache.* W. H. DAY, M.D. (*Lancet*, Sept., 1875.)

This is an article called forth by a previous one on the same subject by Dr. Moxon. Dr. D. objects to the classification of sick-headache, as depending on the digestive system. "The nervous system is primarily at fault," and the digestive disturbance is a consequence. In persons predisposed to it, overwork, fatigue, late hours and excitement bring it on when no derangement of the digestive organs exists. Some young women with dysmenorrhœa suffer at every menstrual period. The author favors the use of bromide of ammonium and iron tonics, taken for a long time, to modify the nervous sensibility.

The headache occurring in many children who are debilitated, who have some hereditary cachexia, in those who show an aptitude for learning, and who after any mental effort become listless and variable in temper and manner, sometimes dull, at others fidgety and quarrelsome, with weak pulse and frequent sighing and yawning and poor appetite—this headache he thinks is due to some "intricate change in the cerebral membranes or tissues of the brain." The headache may last for months together, and is aggravated by rigid discipline, moral or physical.

Bromide of potassium is the remedy, and must be continued for a long time, and be followed by cod liver oil and other tonics; iodide of potassium is often a valuable addition. He agrees with Dr. Moxon, that when, with headache, sickness of stomach and prostration are ex-

in a male patient. It was effectually relieved in less than a minute by compression of the testicles. Antispasmodics were then prescribed, and the man returned next day to his work.

5. *Hystero-Epilepsy with Anuria.* M. BOURNEVILLE. (*London Med. Record; Monthly Abstract.*)

A woman, aet. 23, had always enjoyed good health. Then, in 1854, she was suddenly frightened. The next year, in an attack of hystero-epilepsy she fell into the fire and burnt her face. In 1859-60-63-65 respectively, she had similar crises. In 1866 she had cholera, after which she had suppression of urine for a week. The secretion reappeared, but catheterization became necessary, and was performed daily until 1875. After 1869, she had several attacks of hystero-epilepsy, followed by contractions in the upper and lower limbs. These contractions decreased at times and were partially cured, but recurred and remained permanent in several parts, (the upper and lower limbs of the left side in particular). On May 17, 1875, she had a hystero-epileptic attack preceded by an aura (ovarian and anal pains with irradiations to the epigastrium, neck and temples); there were cries, deviation of the eyes, distortion of the face (which was of a violet tinge); the right arm was bent and remained fixed for three hours. Next day there was contraction of the legs and arms, complete anæsthesia, double amblyopia and contraction of the jaw. The patient could not speak, and there was neuralgia, for which morphine was injected. This condition continued until May 22, when there was an exacerbation, and suddenly the patient was completely cured.

Thus disappeared in a few minutes a retention of urine that had lasted since 1866; a contracture of the jaws, necessitating alimentation by a sound during ten months, aphonia of equal duration, and a contracture of the members of the left side dating from 1869.

The urine had been analyzed frequently. During three

soft tissues were in perfect apposition with the bone. The blood withdrawn, the needle of the aspirator proved the whole parietal bone denuded of its periosteum. During the operation the child was perfectly quiet, save when the needle was thrust through the scalp. The needle withdrawn, Lister's antiseptic dressing was applied, and a certain pressure exerted on the scalp by means of strips of adhesive plaster, to prevent a refilling of the tumor. On the ninth day after the operation, this dressing was removed for the first time, when everything was found in a normal condition.

9. *Gastro-Pulmonary Fistula Consecutive to Gastric Ulcer.* INLINSBERGER. (*Berl. Klin. Woch.*, No. 51; *La France Médic.*, October 2.) .

Muco-purulent expectoration, mixed with alimentary substances, occurred in a patient whose epigastric uneasiness and distension were relieved by the ejection of these matters.

It was discovered that the pyloric extremity of the stomach had become adherent to the liver, at the insertion of its suspensory ligament. A large perforation of the pyloric portion of the stomach communicated above with a cavity as large as the fist, full of air and putrid matter. The parietes of the latter were formed by the thoracic walls, anteriorly and to the right; by the liver, below; by the stomach on the left; and posteriorly and inferiorly by the diaphragm. This muscle was adherent to the pleura and the lung, and exhibited an opening similar to that in the stomach. Into this cavity opened the bronchi, and thus was effected a communication with the trachea. There were several gastric tumors, some of which had ulcerated.

IV. THERAPEUTICS.

1. *Researches on the Absorption and Elimination of Iodine.* ED. WELANDER (*Allg. Med. Central Zeitung*, 1875. No. 77.)

During the past three years the author has been experimenting with iodine in the hospital at Stockholm; he administered it per os, per anum, hypodermically,

"Purgatives act by stimulating the secretion of fluid from the intestines, as well as by increasing peristaltic action. They prove useful in many ways. They hurry food out of the alimentary canal and thus lessen the injurious effects of overeating. By expelling irritating substances from the intestine they arrest diarrhœa, and remove headache and other pains, caused either by the abdominal irritation or by the absorption of poisonous matters produced by imperfect digestion and decomposition of food. They relieve biliousness by removing bile, and are most efficient aids in the treatment of chronic poisoning by lead, mercury or other metals. It is probable that pepsin and pancreatic ferment are absorbed from the intestine and circulate in the blood, where the latter assists in the production of animal heat. They are then secreted anew by the stomach and pancreas, and do their work again. Purgatives lessen their quantity as well as that of the bile; they may thus be useful in fevers, but they injure old and feeble persons, both by diminishing their calorific power and impairing their digestion. They relieve inflammation by lowering the blood pressure and thus diminishing congestion; and they prove beneficial in dropsies both by abstracting water from the blood and diminishing congestion in the kidneys."

3. *Cantharidal Strangury.* STARR. (*Practitioner.*)

Dr. L. E. Starr says that cantharidal blisters, moistened before application, with alcohol, will produce no strangury from the absorption of the active principle of the fly. Repeated trials with the above named result uniformly, lead him to give this fact to the profession.

4. *The Bromhydrate of Quinine.* GUBLER. (*Times and Gazette, Oct. 9, 1875.*)

Terminating his account of the Therapeutical Employment of Bromhydrate of Quinine (*Journal de Thérapeutique, September 10*), Prof. Gubler arrives at the following conclusions:—1. The bromhydrate cor-

1st. The cold injection has a local and general physiological action.

2d. The local action consists of a sensation of coolness, followed by intestinal contraction.

3d. The general action produces a reduction of the pulse, diminution of animal temperature, and sedation of the nervous system; it abates the thirst, stimulates the appetite, and increases the secretions.

4th. This cooling, sedative and tonic action is uniform in its character for all injections, the temperature of which is below 38° (C.); but it is of greater intensity and more durable in proportion as it is colder and more abundant and often repeated.

5th. The therapeutic indications for cold clysters are numerous; it is useful, from its local action in diseases of the abdomen, and from its general action in febrile disorders. From this double action it is indicated and is successful, as a principal remedy, in typhoid fever.

6. *Use of Electricity for Hyperpyrexia in Typhoid Fever.* GLUK. (*Annals Univ. de Med.*, 1875.)

In thirty cases, where the temperature exceeded 102° F., the author used the following means: He applied the positive pole from a pile with constant current upon the third cervical vertebra, and the negative pole upon a level with the superior cervical ganglion of the great sympathetic. Without going into details, he says there was *always* a considerable lessening of the temperature.

7. *Electrolysis Applied to the Treatment of Various Tumors.* LUIGI CISELLI. (*Il Galvani*, 1874, Nos. 1, 2, 3.)

The author thus sums up the three modes of action of the electrolytic effects of the galvanic current: 1st, cauterization and destruction of the tissues; 2d, partial cauterization and modification of the involved pathologic tissues; 3d, modification of the tissues, without cauterization.

2. *Narcotism by the Products of Tissue Change after Fatigue.* PREYER.
(*Times and Gazette*, August 28.)

The fact that severe fatigue, either of the muscular or nervous system, predisposes to sleep, has led Dr. W. Preyer, of Jena, to make experiments with those substances which are most likely to be formed in the tissues after such exertion, especially lactic acid, to see whether they possess any narcotic properties. He finds, after a long series of observations and experiments, that lactate of soda, either subcutaneously injected in a concentrated aqueous solution, or introduced into the empty stomach in large doses, frequently induces sleep, if the subject is kept quiet and undisturbed. There are, however, considerable individual differences in its effects, both on animals and men, not only as to the time of onset of sleep, but also as to its duration and intensity. Young and small animals are affected more easily than old and large animals. Preyer finds that the exhibition of such liquids as are favorable to an abundant production of lactate of soda in the intestinal canal—*e. g.*, concentrated syrup or copious draughts of sour milk, and of whey—in many cases give rise to drowsiness, and even to actual sleep; and he thinks this fact might be of practical application in some diseases, where morphia and chloral are now exclusively ordered. Lactate of soda in doses much larger than are required to induce sleep, increases the number of respirations and also their depth; and reflex irritability, and (in warm-blooded animals) the temperature, are diminished. Dr. Preyer, whose communication will be found in *Centralblatt*, (No. 35, August 7), from his experiments on animals is strongly opposed to the lactates of potash, magnesia and lime for narcotic purposes, in the human subject.

3. *New Test for Amyloid Tissues.* PROF. HESCHL. (*Wiener Med. Wochenschrift*, No. 32, 1875.)

In 1871, the Professor discovered in his writing fluid, a very delicate test for amyloid degeneration of tissues.

5. *Changes Produced by the Circulation in the Volume of Members.*

At the late "French Association for the Advancement of Science," M. Franck made a very interesting communication upon the above subject. It is thus epitomized by the *Progrès Médical*, Sept. 4, 1875 :

"If the hand be plunged into a vessel of water, and care be taken to exclude the air, the level of the liquid will be seen to rise with each augmentation of volume of the immersed member. If a vertical tube be adapted to this vessel the changes in the level will be more appreciable and can be recorded in the form of a tracing. It is possible, at the same time that the changes of volume of one arm for example are being studied, to take, upon the same person, a tracing of the pulse of the other arm, a tracing of the respiration and one of the beatings of the heart.

"Now, it can be seen that the tracing of the augmentation of volume and that of the pulse give a parallel curve; but the trace of augmentation of volume is modified by the respiration. The curve of the respiration does not exactly correspond with the deviations that the respiration causes the curve of the changes in the volume to undergo. There is not perfect synchronism, since the two lines cross each other. Under the influence of effort, the outline of the tracing of the augmentation of volume rises rapidly, then it remains stationary whilst the amplitude of the pulsations diminishes. If, by a ligature moderately tightened, the return of venous blood is prevented, the tracing takes exactly the form of a pair of stairs, the steps of which progressively diminish in height. It becomes a horizontal line when the pressure in the veins becomes equal to the cardiac impulse.

"If the two femoral arteries be compressed, the tracing rises during two beats. During the first beat, there is a movement of quick ascension, corresponding to a brusque suppression of a large vascular area. During the second beat, there is a progressively ascending movement, cor-

vanced, we must respect the manner in which they are given, and the names of the investigators who support them. Some things which seem probable to the author seem very improbable to us ; for instance, he thinks that hysteria, one of the causes of palpitation, is always the result of ovarian congestion or chronic ovaritis. We think this an error, though, of course, we agree that palpitation may be produced by irritation of the sexual organs.

The description of the structure of the heart and its nerve supply is doubtless more nearly correct than that found in older works. With regard to the disputed question, as to the causes of the first sound of the heart, the author believes that there are two principal factors viz., contraction of muscular fibre of the ventricular walls, and closure of the auriculo-ventricular valves. Two lesser factors are given, viz., the apex beat against the chest wall, and the rushing of blood through the aortic and pulmonic orifices.

In some recent publications, muscular contraction *per se* is said to have no part in the production of the heart sounds, and the majority of the profession seem of this opinion ; yet we think any auscultator may satisfy himself of the correctness of the author by a simple experiment. As we listen over the ball of the thumb, where the skin will not move beneath the stethoscope, we hear with each contraction of the subjacent muscles a sound similar to the first sound of the heart. A like sound, though more intense, may be obtained over the fore-arm while the fingers are being flexed.

It is important to appreciate this fact, for the muscular element of the first sound varies in intensity directly with the varying strength of the ventricular walls.

The author's remarks upon the character of the pulse, as a means of diagnosis, are worthy of attention ; and his descriptions of some of the signs and symptoms of cardiac diseases are uncommonly clear.

In place of the common belief that little can be done for patients suffering with disease of the heart, the

Cardiac hypertrophy, though a conservative process, is apt to be followed by a train of unfortunate consequences. At first no ill effects are noticed. The augmented force of each pulsation produces extreme distension of the elastic arteries, and this is followed by increased recoil, which, by forcing a larger amount of blood through the coronary arteries, supplies the ventricular walls with the increased nourishment demanded. Eventually, however, strain upon the arteries induces atheroma of their walls; they become rigid, and thus offer a new impediment to the flow of blood, while at the same time they are so weakened that the laboring heart is liable to cause rupture of their fragile coats. Rupture is most likely to occur in the thin walled arteries within the encephalon, therefore, in this condition, we have great liability to apoplexy. Diminished elasticity of the arteries lessens their recoil, in consequence of which the coronary blood-vessels are imperfectly filled, and the heart walls suffer for want of nutriment. As results—hypertrophy, the necessity for which is constantly increasing, ceases; atrophy follows, and soon dilatation; and with dilatation come all the baneful effects of venous congestion, and imperfect oxygenation of the blood.

In this chapter also are shown the effects of renal disease on other organs, as the brain, air passages, alimentary canal and skin.

The author has shown, the manner in which disease of the heart may cause Bright's disease; and how these diseases act and react upon each other, under the constant effort of nature to maintain an equilibrium between the various organs of the body.

On a fly-leaf half a dozen mistakes are pointed out, but we cannot understand why these are mentioned while the multitude remain unnoticed. It has never been our fortune to read a book so filled with grammatical faults and typographical errors. Involved and obscure sentences are constantly occurring, to the great annoyance of the reader. In some of these the author is made

of vision and its optical defects in a way that can hardly be surpassed. Both books, however, containing so much that is unpalatable for a reader not familiar with the higher mathematics, have not found so large a circulation in the profession as they deserve for their ingenious composition and their interesting contents. For this reason the author has endeavored "to give, in a concise and popular, yet comprehensive form, a resumé of our present knowledge of physiological optics and the defects of the eye as an optical instrument."

The book is divided into three parts and an appendix. The *first part*—Physical Optics (pages 17 to 68) is a short abstract of the properties of light and its physical laws; it is evidently intended to give the reader such preliminary information as he needs in order to understand the other parts of the book. The author would have done better had he omitted such subjects as Fluorescence, Phosphorescence, Spectral Analysis—interesting though they may be—and by enlarging upon those laws which have a direct bearing on the optical properties of the eye.

The *second part* (pages 68 to 168) is devoted to the discussion of "Dioptrics," "Visual Sensations" and "Visual Perceptions." The composition of this portion of the book has materially suffered through the inability of the author himself to write and revise the manuscript on account of a serious affection which befell his eyes. Too brief in some important points (dioptrics, ophthalmoscope), too lengthy in some immaterial questions (shape of spectacles), it is not arranged in that systematic order most intelligible to the learner. Confusion creates confusion.

The *third part* (pages 168 to 284) treats in a plain and comprehensive way of the "Errors of Refraction," (Hypermetropia, Myopia, Astigmatism) and the "Defects of Accommodation," (Presbyopia, Aphakia). But we are greatly surprised at the author's absolute silence in regard to paralysis and spasms of the accommodation,

mortal Trousseau, the forcible diagnostic elucidations of Da Costa, and the beautiful and interesting theories of the late Dr. Bentley Todd." The preface contains the names of not less than thirty-five different authors to whose works he is indebted for the major part of his own. This recognition of authority is honorable, and would be highly praiseworthy had there been more cause for it. But the list, unfortunately, contains not one of the names of the most celebrated French and German teachers who have recently written upon the subject of nervous diseases. To attempt the compilation of a treatise concerning any scientific subject without an acquaintance with the most recent works of French and German specialists in the original, is an unpardonable sin. The bookmaker who forages only among English books and English translations is likely to find himself ten years behind the times. This, we fear, is true of too much that is palmed off upon the unsuspecting medical student. It certainly is true in the present instance. Since, then, we are dealing with a compilation of this sort, rather than with an original work, it would be hardly fair to single out for objection any particular passages which may admit of question. As the lawyer said, when the judge overruled all his special objections, "we object to the whole proceeding."

Such books are not needed by practitioners of medicine—their necessities demand a wider range of reference. They are worse than useless to medical students, because they tend to beget a cursory, slipshod method of study, and, moreover, do actually serve as a barrier between the mass of students and the really good books which they ought to find in their hands. When the average graduate has purchased a volume like this, perhaps the production of a favorite professor, it will be a long time before he buys another—even though ten-fold more valuable and recent than the one in which he has invested his funds.

This book will secure for its author a certain kind of

reputation, but its effect upon that portion of the profession who may accept it as their *vade mecum* will be nothing less than cerebral anæmia, and mental paresis.

H. M. L.

ON POISONS IN RELATION TO MEDICAL JURISPRUDENCE AND MEDICINE. By *Alfred Swayne Taylor, M. D., F. R. S.* Third American, from the Third and Thoroughly Revised English Edition. Philadelphia: Henry C. Lea.

"Taylor on Poisons" is so well known to English speaking physicians that an extended notice of a new and thoroughly revised edition is not needed. The work has been for some time out of print, because the author has proferred to bestow upon it the care and attention needed to make it fully equal to the present aspects of toxicological science, rather than to issue a mere reprint of a former edition. The chapters omitted have been fully replaced by new matter in accordance with the needs of to-day, keeping the work strictly practical. As a manual for the student and practitioner we do not hesitate to pronounce this the best of its kind in our language.

It is pleasant to find the investigations of American physicians quoted so fully by a standard authority of conservative old England.

H. P. M.

DIE RESULTATE DER GELENKRESECTIONS IM KRIEGE. NACH EIGNEN BEOBSACHTUNGEN. Von *E. Bergmann*, Professor d. Chirurgie in Dorpat. Giessen, 1874. 4° mit 20 Tafeler albertotypie und einer lithographirten Tafel.

THE RESULTS OF THE EXCISIONS OF JOINTS DURING THE WAR. By *E. Bergmann*, Professor of Surgery in Dorpat. Giessen, 1874.

This is a very interesting account of the excisions of joints performed by Professor Bergmann during the Franco-German war, in the hospitals at Mannheim and Karlsruhe. He reports nine excisions of the elbow (two fatal results), fifteen excisions of the shoulder (three fatal results), and eleven of the ankle joint (two fatal results).

The history of each case is given very extensively, and what adds very much to the value of the book, the ultimate condition of the limb when examined two and three years after the operation, is carefully recorded and demonstrated *ad oculos* in twenty photographic plates. A lithographic plate contains the drawings of a number of the excised bones.

Translations.

HERMAPHRODISM,

FROM A MEDICO-LEGAL POINT OF VIEW.

Translated from the French of Basile Poppesco,

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(Concluded from page 876.)

OBSERVATIONS.

OBSERVATION I, (due to the kindness of Dr. Châtillon). Apparent hermaphrodisism in a person of the male sex.

P—, aged nineteen years, had resided in Paris since he was five years old. A consultation had been held a long time previously, at which MM. Ricord and Clerc were present. He wishes now to know if he can, or cannot receive a *carte*, which he claims, in order that he may give himself more fully to prostitution. It was decided that this *carte* should be refused; because, P— was a man.

He was considered as the subject of complete hypospadias, with this peculiarity, that the penis was so rudimentary that its volume did not exceed that of a well developed clitoris. The urethral canal was larger than normal, but it terminated in the bladder and not in a vagina. The rectal touch did not permit one to feel an uterus, nor had menstruation been established. However, the general configuration of the body, the aspect of the face, the quality of the voice, are rather those of the woman; the breasts, moreover, are quite rudimentary; the skin is smooth in those places where it normally is in the woman.

Concerning the tastes of P—, they appear to be those of a woman, and he denies with energy, and angrily, the accusation made against him, which is that he has a predilection for women.

time, incorrectly entered on the registers of civil state as being of the female sex, but is, in reality, a male, in whom the development of the external genital parts presents a malformation well known in science.

OBS. III, (due to the extreme kindness of my learned master, M. Gueneau de Mussy). Apparent hermaphrodisism in-the male sex.

In 1848, I was consulted by a woman for her daughter, who, eleven years of age, had for some time exhibited many disturbances of her health. I was immediately struck by the walk of this child; there was something masculine in her physiognomy, and in her manner; the volume of the chest was noticeable at the base; supposing a malformation, I demanded of the mother if her child presented nothing peculiar; she responded to me, blushing, that there was something extraordinary in her conformation, but, till then, she had preserved the most absolute secrecy respecting this. At my solicitation, the mother submitted her child to my examination, and this is what I recognized. The pubis was covered with hair, and had been since the age of five, according to the mother. Beneath the pubis, there existed a sort of penis, having a length of about two-thirds of an inch, and terminating in a slightly swollen extremity; on its inferior surface, there was a groove, representing the superior wall of the urethra, continuing beyond at the level of the orifice of a veritable canal, which opened behind the base of the penis. Still posteriorly, there existed a kind of vulva, bordered by two rudimentary labia; this vulva limited inferiorly a little vaginal canal, into which I could introduce my little finger, and which terminated superiorly in a *cul-de-sac*. There was no trace of the testicles, either in the labia, or at the level of the rings. Having introduced a sound into the bladder, and my index finger into the rectum, I was enabled to recognize that my finger was separated from the sound only by a membrane, and consequently I was able to conclude, with approximative certainty, that the uterus did not exist.

The principal details of this observation permit us thus to affirm the existence of a masculine sexuality, with arrest of development, which had an apparent similarity of the external genital organs to those of the female sex.

OBS. IV. Hermaphrodisism with sex imperfectly defined. (Personal observation).

In 1867, when I was physician of the District of —, I was

and ovaries, prevents us from concluding, in a positive manner, upon a feminine sexuality.

OBS. V. Bisexual hermaphroditism.

Dr. Ceccherelli published in the journal *Lo Sperimentale*, of February, 1874, (Florence), the description of an hermaphrodite whom he had been called to examine. The subject had already been studied by Rokitansky, Seultz, and especially by Virchow, who had published a description of him in his *Archives of Pathological Anatomy*.

This monster is forty years old. The breasts are largely developed and pendulous; the right eye is larger than the left. The penis at the meatus has hypospadias; but a sound can be entered, which reveals another opening, two-thirds of an inch from the meatus, through which the urine and spermatic fluid is passed. There is but one, very well developed testicle. The penis and scrotum on the right, and the prepuce on the left, is the arrangement which, till recently, had been mistaken for a vulva, and the person had been considered as belonging to the female sex, and had received the name of Catherine. The glans had been mistaken for the clitoris. In introducing the finger between the two folds, below the glans, an eminence was felt, having all the characters of the neck of the uterus. (Seultz).

The female apparatus is complete, and is situated behind a little septum formed by the skin.

Bilroth had proposed the incision of this septum, in order to make more evident the characters of the female sex, which are more in keeping with all the other signs of the hermaphroditism. The catamenia have always been regular till within the past two years. He has, moreover, accomplished the function of copulation of the female sex. The prostate cannot be reached, on account of the uterus. The vesiculæ seminales exist, without doubt, for Catherine is able to be, in turn, the active party of coition, and the sperm, which has been examined by Virchow, contains spermatozooids. (Prog. Méd., 1874.)

This observation appears to us, to be, notwithstanding the brevity of the details which have been given to us, one of the clearest examples of bisexual hermaphroditism: and from a medico-legal point of view, it seems to us that it will be very difficult to establish the civil rank of this person, for the female sexuality appears, at least, as evident as the male sexuality. But, in view of similar cases, considering especially the positive results furnished by the examination of the sperm, and further, on the contrary, that utero-ovarian fecundation will be impossible on account of the abnormal septum, we would not

hesitate, under parallel circumstances, to pronounce in favor of a male sexuality, and to inscribe as males, on the registers of civil state, all persons who exhibit the same vices of conformation.

OBS. VI. Bisexual hermaphroditism. By M. Odin, Interne of the Hospitals:*

Nat. Per., day laborer, aged sixty-three years, born at Millery, (Rhône), entered the Hôtel-Dieu, of Lyon, June 10, 1873, in a state of absolute coma, resulting from an attack of apoplexy on that day, and died on the fourteenth of the same month without regaining his consciousness.

The autopsy made on the following day, under the direction of Dr. Bondet, showed traces of an abundant cerebral hæmorrhage, which had caused the coma and death.

The subject is of medium height; body considerably emaciated; the extremities are short, slim and rounded; the hands and feet are small; the skin fine. The pelvis is narrow and contracted; the hips approach each other; in a word, it has the masculine conformation.

There is but a slight growth of hair, though the scalp and pubis are well covered, while the axillæ have scarcely any hair; the remainder of the surface is bare, and the surroundings of the anus entirely so.

He has no breasts, but the nipples are well developed.

The genital organs present: first, a penis surmounted by a glans; this is imperforate; it has a corona at its base and a furrow on its inferior surface. It is covered with a prepuce throughout its entire extent, save at the inferior part at the level of the furrow.

The penis, measured on the cadaver, was three and one-third inches in length, and nearly of the normal size. Upon its inferior surface, there was a furrow, continuous with that at the glans which terminated in an orifice, situated below and in front of the pubis, through which the urine flowed. The penis is inserted at the commissure of the labia majora which gives origin to it, being continuous with the skin that covers it like a hood, resembling the clitoris.

The scrotum is cleft, and has the aspect of the labia majora covered with hair on their exterior, but smooth, having a semi-mucous surface, on their internal surface. They terminate in front in uniting at the root of the penis, and inferiorly by gradually becoming thinner, and without uniting to form a *fourchette*.

At the bottom of the space included between the labia majora, is the median raphe of the perineum, which extends from the

* Lyon Médical, No. 13 (21 Juin, 1874.)

urinary orifice to the anus, and measures two and one-third inches.

On the right side, near the inguinal ring, there is a little rounded tumor, of the size of a pigeon's egg, which contains a little body, round and movable.

On the other side, the ring has no tumor analogous to the preceding, it is entirely free.

In catheterizing the urinary orifice, one arrives at very different results according as he follows the anterior or posterior wall of the canal. In following the first, the bladder is reached; but in following the second, one reaches a very deep cavity situated behind the bladder.

From the external examination, it is shown that we have to do with an hermaphrodite belonging to the male sex, from the presence of a penis a little irregular, a testicle, and the absence of the breasts and the form of the pelvis; and to the female sex, by the presence of the labia majora, the slight development of the hair upon the surface, the general aspect of the body, and the existence of a cavity behind the bladder, revealed by the catheter.

Notwithstanding these numerous similarities to the female sex, it seems more rational to assign this person to the male sex, to which he belonged during his life.

The internal generative organs are still less characteristic of the sex of the person.

Beginning at the orifice, which we have described, there is a canal of uniform calibre, an inch and a third in length, and one-third of an inch in diameter, lined with mucous membrane which is continuous with that of the labia majora; it terminates posteriorly by an orifice completely closed by an annular membrane like a hymen.

Anterior to this hymen, on the anterior wall of this canal, there is a smaller orifice which leads into the bladder; this is the true meatus urinarius.

This canal is quite anomalous, it being neither the urethra, though there is no other, nor the vagina, it being anterior to the hymen. It is a canal common to the urine, and the secretions from the vagina, formed by the two nymphæ and representing the vulva.

If we go beyond the orifices which we have described, by the anterior, the bladder can be reached, through a canal two-thirds of an inch long. The prostate is entirely wanting. By the posterior orifice, the vagina is reached, having a length of about three inches and a circumference of two inches. The mucous membrane lining the vagina is smooth, and has no trace of columns. There is a little mucus in this cavity. At the superior part, there is a slight constriction, which is directly continuous with the lips of the cervix uteri, without forming a *cul-de-sac*.

ble of an erection and even intromission; consequently this male being is condemned to impotence.

The female being possessed some of the attributes of her sex; she was able to menstruate, but the ovary is too imperfect to furnish ovules; the Fallopian tube is incapable of conducting them, and the uterus of receiving and nourishing them; moreover, the microscope does not show the presence of ovules. Consequently the female being is as impotent as the male being.

Thus, it is seen that this hermaphrodite is equally male and female, or rather, is equally impotent as male and female, incapable of reproducing with either sex, less fortunate than the vegetable, incapable of fecundating himself, though possessing two, nearly complete, generative apparatuses.

This is the complete, or nearly complete, bisexual hermaphrodite of Geoffroy Saint-Hilaire, which is worthy of being described with the cases of Marie-Madeleine, of Lefort, and the hermaphrodite of Schrell, the only known instances in the human species.

N. P.— died a bachelor, but had he any predilections for either sex? Had he ever menstruated? My researches in this direction are not yet completed.

We give this observation with all its details as a striking example of bisexual hermaphroditism. "These cases, moreover," said M. Tardieu, "constitute the true hermaphroditism in which the individual, possessing the attributes of both sexes, is in a state entirely incapable of forming a valid marriage; for, whichever may be the sex to which he is united, there will be between them an identity of sex, that is to say, nullity of marriage."

HISTORICAL NOTICE CONCERNING APHASIA.

By DR. M. JASTROWITZ, OF BERLIN.

(Translated from the "Berliner Klin. Wochenschrift." No. 23, June 7, 1875, by DR. JAMES I. TUCKER.)

Trousseau asserts that the complex symptom, known as aphasia, was first mentioned by Lordat in 1820. We are indebted to Bouillaud for first pointing out its precise anatomical seat by means of a disease of the anterior lobes of the hemispheres which he observed in 1825, and also for an exact formulizing of the idea. Prior to this time, it would seem that aphasia was not defined, as it is at present, to be the inability to form a word *mentally*, the functions of the organs of articulation being at the time

insanabilis, perstat." (I have known many persons who, after being cured of apoplexy, were able to exercise the brain in all its functions save that this one thing alone was wanting, they could not find the right words for designating things. With their hands, their feet, with an effort of the whole body, these unhappy persons would struggle to make known what they wished, yet were not able. This derangement remained through many years, and was often incurable.)

It is surprising that he regards the right-side hemiplegia which usually accompanies the mental phenomena differently from Goethe, inasmuch as he appends the few lines from Malpighi to the effect that he (Malpighi) after a recurrence of a palsy of the right side resulting from apoplexy, nevertheless "*magnum in memoria et ratio-cinio laesionem habuit et quavis minima de causa lacrymabatur.*" (Suffered serious injury in his memory and his reason, and from the slightest cause burst into tears.)

At least the remark of Trousseau does not apply to Van Swieten, viz., that he chose the term aphasia rather than alalia, because it enabled him to draw a sharp line of distinction between this complex symptom and the alalia of the earlier authorities.

"The forms of alalia, of which Sauvages, the two Franks, Bullen, etc., speak, are in the writings of these authors nothing but a conglomeration of contradictory phenomena, which we have of late wrongly endeavored to restore to their former position of honor."—*Clinique Médicale*, Tom II. 669.

Medical News and Items.

OBITUARY.—Dr. F. W. HEADLAND, author of the well known and much prized work on "The Action of Medicines," died recently in London, at the age of forty-six. He was senior physician to Charing Cross Hospital, and was greatly respected by his professional associates.

OBITUARY.—Dr. JOHN HUGHES BENNETT, late Professor Institutes of Medicine in the University of Edinburg, is

site, where the ceremony of the occasion was performed by the officers of the Grand Lodge, assisted by President Freer of the College, and the Masonic bodies in attendance.

This completed, the orator of the occasion, Prof. J. Adams Allen, delivered a most able and interesting address.

In the State of New Hampshire, every physician, surgeon, obstetrician, druggist and druggist's clerk must be provided with a "certificate" granted by legally constituted authority, which certificate shall set forth that the holder thereof is properly qualified to practice his profession. Practicing without this certificate is declared a misdemeanor, and the "fine for the first offense is not less than *fifty dollars* nor more than *two hundred dollars*; for any subsequent offense, not less than *two hundred dollars* nor more than *five hundred dollars*; which fine may be recovered by an action of debt for the use of any person who shall sue therefor, or by an indictment." Each certificate is recorded in a book kept for that purpose, in the county clerk's office, which book is to be known as the Medical Register of said county. The authority for granting these certificates to physicians, is a "board of censors, consisting of not less than three persons," "appointed by each and every medical society, organized under a charter from the legislature of the State of New Hampshire." This board issues, without license, certificates to physicians holding medical diplomas or certificates of examination from some authorized board. It can revoke certificates or declare any man incompetent to practice, for cause. This act does not apply to physicians who have been in practice five years, in that State.

